

ROAD REPAIR AND ACCOUNTABILITY ACT OF 2017
PROJECT BASELINE AGREEMENT

I-5 - PAVEMENT REHAB IN CASTAIC (07-37040)

Resolution SHOPP-P-2324-02B

(to be completed by CTC)

1. FUNDING PROGRAM

- ☐ Active Transportation Program
- ☐ Local Partnership Program (Competitive)
- ☐ Solutions for Congested Corridors Program
- ☒ State Highway Operation and Protection Program
- ☐ Trade Corridor Enhancement Program

2. PARTIES AND DATE

- 2.1 This Project Baseline Agreement (Agreement) effective on October 18, 2023 (will be completed by CTC), is made by and between the California Transportation Commission (Commission), the California Department of Transportation (Caltrans), the Project Applicant, Caltrans, and the Implementing Agency, Caltrans, sometimes collectively referred to as the "Parties".

3. RECITAL

- 3.1 Whereas at its 3/16/2022 meeting the Commission approved the State Highway Operation and Protection Program and included in this program of projects the I-5 - PAVEMENT REHAB IN CASTAIC (07-37040), the parties are entering into this Project Baseline Agreement to document the project cost, schedule, scope and benefits, as detailed on the Project Programming Request Form attached hereto as **Exhibit A**, the Project Report attached hereto as **Exhibit B**, the Performance Metrics Form, if applicable, attached hereto as **Exhibit C**, as the baseline for project monitoring by the Commission.
- 3.2 The undersigned Project Applicant certifies that the funding sources cited are committed and expected to be available; the estimated costs represent full project funding; and the scope and description of benefits is the best estimate possible.

4. GENERAL PROVISIONS

The Project Applicant, Implementing Agency, and Caltrans agree to abide by the following provisions:

- 4.1 To meet the requirements of the Road Repair and Accountability Act of 2017 (Senate Bill [SB] 1, Chapter 5, Statutes of 2017) which provides the first significant, stable, and on-going increase in state transportation funding in more than two decades.
- 4.2 To adhere, as applicable, to the provisions of the Commission:
- ☐ Resolution , "Adoption of Program of Projects for the Active Transportation Program", dated
- ☐ Resolution , "Adoption of Program of Projects for the Local Partnership Program", dated
- ☐ Resolution , "Adoption of Program of Projects for the Solutions for Congested Corridors Program", dated
- ☒ Resolution G-22-29, "Adoption of Program of Projects for the State Highway Operation and Protection Program", dated 3/16/2022
- ☐ Resolution , "Adoption of Program of Projects for the Trade Corridor Enhancement Program", dated

- 4.3 All signatories agree to adhere to the Commission's Guidelines. Any conflict between the programs will be resolved at the discretion of the Commission.
- 4.4 All signatories agree to adhere to the Commission's SB 1 Accountability and Transparency Guidelines and policies, and program and project amendment processes.
- 4.5 Caltrans agrees to secure funds for any additional costs of the project.
- 4.6 Caltrans agrees to report to Caltrans on a quarterly basis; on the progress made toward the implementation of the project, including scope, cost, schedule, and anticipated benefits/performance metric outcomes.
- 4.7 Caltrans agrees to prepare program progress reports on a semi-annual basis and include information appropriate to assess the current state of the overall program and the current status of each project identified in the program report.
- 4.8 Caltrans agrees to submit a timely Completion Report and Final Delivery Report as specified in the Commission's SB 1 Accountability and Transparency Guidelines.
- 4.9 Caltrans agrees to submit a timely Project Performance Analysis as specified in the Commission's SB 1 Accountability and Transparency Guidelines.
- 4.10 All signatories agree to maintain and make available to the Commission and/or its designated representative, all work related documents, including without limitation engineering, financial and other data, and methodologies and assumptions used in the determination of project benefits and performance metric outcomes during the course of the project, and retain those records for six years from the date of the final closeout of the project. Financial records will be maintained in accordance with Generally Accepted Accounting Principles.
- 4.11 The Inspector General of the Independent Office of Audits and Investigations has the right to audit the project records, including technical and financial data, of the Department of Transportation, the Project Applicant, the Implementing Agency, and any consultant or sub-consultants at any time during the course of the project and for six years from the date of the final closeout of the project, therefore all project records shall be maintained and made available at the time of request. Audits will be conducted in accordance with Generally Accepted Government Auditing Standards.

5. SPECIFIC PROVISIONS AND CONDITIONS

- 5.1 Project Schedule and Cost
See Project Programming Request Form, attached as Exhibit A.
- 5.2 Project Scope
See Project Report or equivalent, attached as Exhibit B. At a minimum, the attachment shall include the cover page, evidence of approval, executive summary, and a link to or electronic copy of the full document.
- 5.3 Performance Metrics
See Performance Metrics Form, if applicable, attached as Exhibit C.

Attachments:

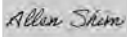
- Exhibit A: Project Programming Request Form
Exhibit B: Project Report
Exhibit C: Performance Metrics Form (*if applicable*)

SIGNATURE PAGE
TO
PROJECT BASELINE AGREEMENT

Project Name I-5 - PAVEMENT REHAB IN CASTAIC (07-37040)

Resolution

(to be completed by CTC)



07/12/2023

Allen Shim

Date

Project Manager

Project Applicant


Chan Kuoch (Jul 19, 2023 10:58 PDT)

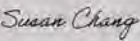
07/19/2023

Chan Kuoch

Date

Chief, Office of Program Management

Implementing Agency



07/19/2023

FOR

Gloria Roberts

Date

District Director

California Department of Transportation



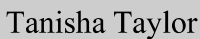
09/26/2023

Tony Tavares

Date

Director

California Department of Transportation



Date

Executive Director

California Transportation Commission

Baseline agreement information was extracted from Caltrans' project data systems. Project description, funding and performance measures are from CTIPS. Project delivery milestones are from PRSM. All information is current and accurate.

[STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION](#)

BASELINE AGREEMENT

Date: 09/01/23 06:35:02 PM

District	EA	Project ID		PPNO	Project Manager
07	37040	0720000128		5994	SHIM, ALLEN
County	Route	Begin Postmile	End Postmile	Implementing Agency	
LA	5	R 59.7	R 73.7	PA&ED	Caltrans
				PS&E	Caltrans
				Right of Way	Caltrans
				Construction	Caltrans

Project Nickname

I-5 - Pavement Rehab in Castaic

Location/Description

Near Castaic, from north of Lake Hughes Road to north of Reservoir Hill Road. Rehabilitate pavement, upgrade guardrail, and replace overhead sign structure and sign panels.

Legislative Districts

Assembly:	36, 38	Senate:	21	Congressional:	25
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PERFORMANCE MEASURES

	Primary Asset	Good	Fair	Poor	New	Total	Units
Existing Condition	Pavement	0.3	112.2	0	0	112.5	Lane-miles
Programmed Condition	Pavement	112.5	0	0	0	112.5	Lane-miles

Project Milestone

	Actual	Planned
Project Approval and Environmental Document Milestone	06/27/23	
Right of Way Certification Milestone		05/03/24
Ready to List for Advertisement Milestone		05/08/24
Begin Construction Milestone (Approve Contract)		01/06/25

FUNDING (Allocated amounts are shaded)

Component	Fiscal Year	SHOPP					Total
PA&ED	22/23	1,408					1,408
PS&E	22/23	3,159					3,159
RW Support	22/23	137					137
Const Support	23/24	6,994					6,994
RW Capital	23/24	297					297
Const Capital	23/24	49,176					49,176
Total		61,171					61,171

Memorandum

To: Susan Chang
Deputy District Director
Program/Project Management
District 7

Date: September 12, 2023

File: 07-370400
07-LA-005
PID: 0720000128

From: ALLEN SHIM
Project Manager
District 7

Subject: SUPPLEMENTAL TO PROJECT REPORT – PROJECT COST

EXECUTIVE SUMMARY

This Supplemental to the Project Report (PR) identifies the change in Project Cost. Programming Document CTIPS will match the Project Report (SPR) following approval of this document. The original PR was approved on June 27, 2023.

This supplement to the PR will update:

1. Section 8 (FUNDING, PROGRAMMING AND ESTIMATE – Programming Table)
2. Right of Way support allocated amount is \$137,000 approved on 08/17/2023

Section 8 – Programming Table:

Fund Source	Programming by Fiscal Year							Current Estimate (Escalated)
20.XX.201.xx	Prior	22/23	23/24	24/25	25/26	Future	Programmed Total	At PAED Total
Component	In thousands of dollars (\$1,000)							
PA&ED Support		1,408					1,408	1,408
PS&E Support		3,159					3,159	3,159
Right-of-Way Support		115					115	137
Construction Support			6,994				6,994	6,994
Right-of-Way			297				297	290
Construction			49,176				49,176	49,176
Total		4,482	59,467				61,149	61,164

APPROVAL RECOMMENDED:

Allen Shim

Allen Shim, Project Manager

APPROVED BY:


Chan Kuoch (Sep 13, 2023 14:47 PDT)

09/13/2023

Chan Kuoch
Chief, Office of Program Management

Date

Project Report

Minor Pavement Rehabilitation

For

Project Approval in the 2022 SHOPP

On Route LA-005

Between PM R59.7R (North of Lake Hughes Rd U.C.)

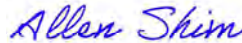
And PM R73.7 (South of Vista Del Lago Rd O.C.)

I have reviewed the right-of-way information contained in this report and the right-of-way data sheet attached hereto, and find the data to be complete, current and accurate:




Dan Murdoch, Acting Deputy District Director, Right of Way

APPROVAL RECOMMENDED:



Allen Shim, Project Manager

PROJECT:


Gloria Roberts (Jun 27, 2023 08:39 PDT)

Gloria Roberts, Acting District Director

06/27/2023

Date

Vicinity Map



This project report has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.

Teresa Martinez *Teresa Martinez*
REGISTERED CIVIL ENGINEER

06-06-2023
DATE



Memorandum

To: Susan Chang
Deputy District Director
Program/Project Management
District 7

Date: September 12, 2023

File: 07-370400
07-LA-005
PID: 0720000128

From: ALLEN SHIM
Project Manager
District 7

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DEPUTY DISTRICT DIRECTOR, et al.
September 12, 2023
Page 2 of 2

APPROVAL RECOMMENDED:

Allen Shim

Allen Shim, Project Manager

APPROVED BY:


Chan Kuoch (Sep 13, 2023 14:47 PDT)

09/13/2023

Chan Kuoch
Chief, Office of Program Management

Date

Project Report

Minor Pavement Rehabilitation

For

Project Approval in the 2022 SHOPP

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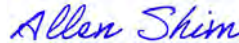
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APPROVAL RECOMMENDED:



Allen Shim, Project Manager

PROJECT:


Gloria Roberts (Jun 27, 2023 08:39 PDT)

Gloria Roberts, Acting District Director

06/27/2023

Date

Vicinity Map



This project report has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.

Teresa Martinez *Teresa Martinez*
REGISTERED CIVIL ENGINEER

06-06-2023
DATE



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1. INTRODUCTION

Project Description:

This Project Report proposes a Minor Pavement Rehabilitation (CAPM) project which consists of various types of work on Route 5 in Los Angeles County, from 0.2 mile North of Lake Hughes Road Undercrossing (PM R59.7R, PM R59.7L) to 0.7 mile South of Vista Del Lago Road Overcrossing (PM R73.7). The main work is pavement resurfacing and restoration, and the project also upgrades the existing metal beam guard rail (MBGR) to the current Midwest Guardrail System (MGS), installs three (3) Design Pollution Prevention Infiltration Area (DPPIA) as permanent Best Management Practices (BMP), one (1) Census Station, rumble strips, AC dikes on mainline and ramps, ramp termini, and replaces structural sections in localized areas. Furthermore, two (2) Maintenance Vehicle Pullouts (MVP) and one (1) retaining wall will be required as a result of the BMPs.

The project's schedule is updated, and cost increase is based on the updated scope and estimates:

Project Limits	Primary: 07-LA-005-PM R59.7R/R73.7 Secondary: 07-LA-005 R59.7L/R65.4L	
Number of Alternatives	2	
	Current Cost Estimate:	Escalated Cost Estimate:
Capital Outlay Support	\$10,154,000	\$11,698,000
Capital Outlay Construction	\$44,742,000	\$49,176,000
Capital Outlay Right-of-Way	\$212,000	\$289,340
Funding Source	Minor Pavement Rehabilitation - 20.XX.201.121	
Funding Year	FY 2023/2024	
Type of Facility	Freeway	
Number of Structures	N/A	
SHOPP Project Output	112.5 Lane-Mile Pavement	
Environmental Determination or Document	Categorical Exemption/Categorical Exclusion	
Legal Description	On Interstate 5 in Los Angeles County from Lake Hughes Rd UC to Vista Del Lago Rd OC, PM R59.7R/R73.7 (R59.7L/R65.4L)	
Project Development Category	5	

2. RECOMMENDATION

It is recommended the Project Report be approved with the proposed build alternative and proceed to the design phase. The Project Development Team (PDT) has been consulted with in respect to the recommended scope of work and their views have been considered, and they agree with the proposed scope as identified in this report.

3. BACKGROUND

3A. Project History

The scope of this project was proposed in the original pavement project (EA 32340). During the initial field review held in September 2016, it was observed that there were longitudinal cracks and settlement in AC pavement, slope failure in embankment, and sand/water washing onto roadway from damaged drainage system. The pavement assessment system that was used in 2016 had determined that the pavement would have to be rehabilitated in FY 20/21. In 2019, the Department updated their Pavement Assessment System and conducted a new assessment of the pavement within the project limits and determined that the current pavement was in good condition. It also determined that the pavement would need to be rehabilitated in FY 24/25. Therefore, it was decided to defer the pavement rehabilitation portion of the project to a new project which is this project, EA 37040.

The remaining work which included repairing and replacing 26 drainage systems, replacing a major utility undercrossing, and stabilizing several slopes became the remaining scope of the original project under EA 32340. As a result, a new MPR project (EA 37040K) was created to cover the deferred pavement rehabilitation work.

In February 2020, a follow-up field meeting with the district pavement program advisor and the maintenance personnel concurred that the roadway pavement still showed signs of deterioration.

In February 2023, it was decided to advance this project to FY 23/24 instead of the original FY 24/25 to accommodate the district's delivery and variance commitments.

3B. Existing Facility Conditions

Freeway:

Within the project limits, Route 5 has 4 mixed-flow, 12 feet wide lanes in each direction. Shoulders are standard with right shoulders measuring 10 feet in width, while left shoulders are 8 feet in width. The northbound and southbound segments separate into two alignments within the project limits but joins back into one alignment. Refer to **Attachment B** for existing cross sections.

Right-of-Way (R/W):

All proposed work is within the existing Caltrans R/W. The typical R/W width is 140 feet minimum when the NB and SB direction is separated. The typical R/W width is approximately 420 feet minimum when the NB and SB alignments are together. There is a maintenance access road between the NB direction and the SB direction at approximately PM R64.0 which is also used by California Highway Patrol as an access road.

Utilities:

There are no utility conflicts within the project limits. In some locations along the northbound and southbound direction, there are existing utilities consisting of crude oil pipe lines, mobile telecommunications conduits, and Southern California Gas lines. The estimated number of utility potholes that will need to be performed are shown on the R/W data sheet assessment (**Attachment E**).

Landscape:

Existing landscape consists of native vegetation and some invasive plants along the edge of traveled way. Dry vegetation on both directions with no visible obstructing large trees. There are steep slopes on the sides in some locations. There are no existing irrigation systems within the project limits area. If any functioning irrigation systems are found within the proposed scope of work, they will be protected-in-place or funding and scope will be provided to repair irrigation that may become damaged during construction.

Traffic Management System:

There are closed circuit television systems (CCTV), changeable message sign (CMS), traffic census stations (TCS), and traffic monitoring stations (TMS) along the corridor project limits. A new census station will be installed at approximately PM 65.967.

Lights:

There are safety streetlights at various locations within the project limits and will not be impacted during construction.

Signs:

There are 80 roadside signs at various locations within the project limits.

Median:

There are existing double thrie-beam median barriers from PM R65.4 to PM R67.5, and they continue from PM R69.6 to PM R73.5.

Guardrail:

Existing MBGR will be replaced with the new MGS including the end terminal treatments. The MBGR locations are listed in **Attachment L**.

Railroad Facilities:

There is no railroad involvement within the project limits.

Other – Sight Distances:

The proposed improvements will have no impact on stopping sight distances for both horizontal and vertical curves.

Other – Cross Slopes:

The current cross slope on both the northbound and southbound mainline for most stretches is typical at 1.5%. For the mainline shoulder, the cross slope varies from 0% to 7.5%.

Other – Vertical Clearance:

There are no vertical clearance issues. There are eight structures within the project limits, which comprise of undercrossings and underpasses, in which the proposed improvements will be performed on top.

4. PURPOSE AND NEED

Purpose:

The purpose of this pavement rehabilitation project is to preserve, repair, and extend the service life of the pavement, improve pavement structural integrity, and improve ride quality. Overall, the objective is to improve safety and upgrade assets to current standards.

Need:

The existing pavement distress and deterioration continues to decrease the ride quality under continuous heavy traffic. The project is needed to address pavement deficiencies within the project limits. In addition, this project upgrades existing assets to current standards.

4A.Problem, Deficiencies, Justification

Deteriorating pavement on mainline, shoulders, and ramps must be addressed and rehabilitated.

Existing MBGR needs to be upgraded with current standard MGS.

A new Census Station will be installed as part of a Transportation Management System asset.

4B. Regional and System Planning

Pavement rehabilitation is an integral process to preserve the State Highway System (SHS) and provide mobility and access to different regions throughout the state, especially disadvantaged communities. Mountainous areas, such as Route 5, are especially crucial because of the changes in elevation could make for unideal road conditions.

This project complies with District 7 System Planning and Regional Transportation Planning. The proposed project does not have any conflict with the Caltrans Strategic Management Plan. This project will not increase vehicle miles traveled.

4C. Traffic

Traffic Data

Data Year (2021) AADT	<u>98,800</u>		
Construction Year (2025) AADT	<u>122,500</u>	D	<u>60%</u>
20-Year Forecast (2045) AADT	<u>N/A</u>	T	<u>18.4%</u>
DHV	<u>11,600</u>	V	<u>55 mph</u>

Note: AADT (annual average daily traffic), DHV (design hourly volume), D (percentage of the DHV in the direction of heavier flow), T (truck traffic volume), V (design speed in miles per hour)

Collision Analysis

The Traffic Accident Surveillance and Analysis System (TASAS) three-year period data in the table below indicates that the actual fatal collision rate on the freeway northbound alignment is greater than the average rate, while the actual fatal plus injury rate is below than the average rate. In the southbound direction, the actual fatal plus injury rate is greater than the average rate, while the fatal collision rate is below than average. By rehabilitating the pavement surface, upgrading the MBGR to MGS, and installing the rumble strips and restriping, it is anticipated that the number of accidents will be reduced.

County-Route (postmile range)	Number of Collisions			Actual Rate (Acc/Million Vehicle Miles)			Average Rate (Acc/Million Vehicle Miles)		
	F ¹	F+I ²	Total ³	F ¹	F+I ²	Total ³	F ¹	F+I ²	Total ³
LA-5 NB PM R59.700R/R64.429R	1	26	114	.006	.15	.64	.005	.18	.55
LA-5 SB PM R59.700L/R64.495L	0	37	97	.000	.20	.54	.005	.18	.55
LA-5 PM R65.434/R73.700	4	84	306	.006	.13	.48	.006	.20	.62

Notes: 1 – Fatal Collisions, 2 – Fatal Collisions + Injury Collisions, 3 – All Reported Collisions

5. ALTERNATIVES

5A. Viable Alternatives: One build alternative was studied and has been chosen as the preferred alternative for this project.

Alternative 2: Programmable Project Alternative – MPR Strategy

- 1) Cold plane 0.20' Asphalt Concrete (AC) section and overlay 0.20' of Rubberized Hot Mix Asphalt – Type G (RHMA-G) on freeway mainline and shoulder (see **Attachment B** for typical cross sections)
- 2) Cold plane various depths of AC section and overlay with Hot Mix Asphalt – Type A (HMA-A) on ramps (see **Attachment B** for typical cross sections)
- 3) Replace structural section at various localized areas (see **Attachment K** for list of locations and **Attachment B** for typical cross sections)
- 4) Reconstruct approximately 203,000 feet of AC dikes on mainline and ramps
- 5) Install 12" rumble strips on mainline inside and outside shoulders throughout the project limits
- 6) Install ramp termini at NB and SB Templin Highway off-ramps
- 7) Upgrade existing MBGR to MGS (see **Attachment L**)
- 8) Install End Terminal Systems
- 9) Install Transition Railings
- 10) Upgrade and modify existing drainage facilities due to the impacts caused by the installation of MGS
- 11) Install one (1) Census Station – Transportation Management System at PM R65.967
- 12) Install three (3) Design Pollution Prevention Infiltration Areas (DPPIAs) as permanent Best Management Practices (BMP)
- 13) Install two (2) Maintenance Vehicle Pullout (MVP) at DPPIA locations and one (1) retaining wall (Type 1 Case 1, approximately 4 feet in height) at MVP location

Nonstandard Design Features

The following nonstandard geometric feature exists within the limits of this Minor Pavement Rehabilitation Project, and pursuant to Design Information Bulletin (DIB) 81-02 Section 2.3, the preparation of a Design Standard Decision Document (DSDD) is not required as the design does not degrade the geometric features of the facility.

- Feature No. 1 – Existing inside shoulder is 8 feet throughout the limits of the project.

The project scope in this preferred alternative will not degrade the safety or geometric features of the existing shoulder width. All other proposed assets as part of the project scope meet design standards.

5B. Rejected Alternatives

Alternative 1: No Build

The No Build alternative was rejected as it would continue to result in further deterioration of existing pavement surfaces, decreased ride quality, and increased maintenance costs. This pavement rehabilitation work will need to eventually be done on this route for rider safety. Furthermore, this alternative does not meet the Purpose and Need of this project.

6. CONSIDERATIONS REQUIRING DISCUSSION

6A. Hazardous Waste

The following recommendations were given in the Hazardous Waste Assessment, see **Attachment D**:

- *Treated Wood Waste*: Wood posts from MBGR and signs that require removal shall be considered treated wood waste (TWW) and managed under CA hazardous waste regulations.
- *Yellow/White Traffic Striping and/or Pavement Markings*: There is a concern that white and yellow thermoplastic and paint traffic striping and pavement markings that are to be removed may contain hazardous levels of lead and chromium. A project-specific Lead Compliance Plan (LCP) is required to address how the waste will be handled to protect workers and the public from exposure.
- *Aerially Deposited Lead*: There is concern that Aerially Deposited Lead (ADL) contaminated soil may exist in unpaved areas. A project specific ADL investigation will be conducted during PS&E phase. To ensure the safety of workers and the public from lead-contaminated soil, an LCP must be prepared, approved, signed, and stamped by a Certified Industrial Hygienist (CIH).

6B. Value Analysis

A Value Analysis (VA) study was conducted from February 6, 2023 to February 8, 2023 since the total project cost exceeds the FHWA VA study criteria threshold of \$25 million. The VA team proposed alternatives which included using RHMA-G in lieu of HMA-A, implementing a cost and time incentive contract to complete construction six months early, and to reduce the overall cost of BMPs. The project had already proposed to use RHMA-G for cold plane and overlay, and cost-efficient BMP alternatives have been used to reduce the cost of permanent BMPs. The PDT does not agree with implementing a cost and time incentive contract due to lane closure constraints and schedule conflicts with ongoing projects within the project limits.

6C. Resource Conservation

Every effort of conservation and re-use of materials will be applied, provided it conforms with Caltrans standards and policies.

6D. Right-of-Way Issues

All work will be performed within the existing Caltrans R/W. Per the R/W data sheet assessment dated 05/23/23, \$289,340 is allocated for utility potholing. See **Attachment E**.

6E. Environmental Compliance

The environmental approval for the California Environmental Quality Act (CEQA) is Categorical Exemption, and for the National Environmental Policy Act (NEPA), is Categorical Exclusion. See **Attachment C**.

6F. Air Quality Conformity

Highway and Transit projects of types listed in Table 2 of Section 40 CFR 93.126 are exempt from the requirement to determine conformity. Based on the proposed improvements, this project is classified in Table 2 under “Safety: Pavement resurfacing/rehabilitation” and is therefore exempt from all project-level conformity requirements. The project is also exempt from Vehicle Mile Traveled studies because it is not a capacity increasing project.

6G. Title VI Considerations

This project has considered Title VI and has been administered without regard to race, color, national origin, sex, age, disability, or socioeconomic status.

6H. Noise Abatement Decision Report

This project does not require a Noise Abatement Decision Report because it is not a Type 1 project (capacity enhancing project).

6I. Life-Cycle Cost Analysis

Per the Pavement Structural Section Recommendation, if the total percent of slabs warrant replacement in each lane and location exceeds 10% of the total length of each lane, then a Life-Cycle Cost Analysis (LCCA) will be required. There will only be two locations of Isolated Slab Replacement within the route, which would not exceed the 10% threshold. Therefore, this project does not require a LCCA.

6J. Reversible Lanes

This project does not qualify as a capacity increasing or a major street or highway realignment project and reversible lanes have not been considered.

6J. Stormwater Compliance

A long form Storm Water Data Report (SWDR) was prepared in accordance with the July 2017 Edition of Stormwater Quality Handbook – Project Planning and Design Guide (PPDG). See **Attachment J**.

7. OTHER CONSIDERATIONS AS APPROPRIATE

Permits

No permits are required.

Stage Construction

Work will be done behind temporary railing and standard shoulder closure for the construction of the DPPIAs, MVP, and retaining wall. All pavement work will be constructed using standard daily closures. Lane Closure Charts are to be followed throughout the duration of construction as reduced number of lanes will not be approved by the District Traffic Manager.

All fixed objects including streetlights and roadside signs will be protected during construction activities.

Transportation Management Plan

The Transportation Management Plan (TMP) data sheet had been prepared and approved on 12/12/2022. The total estimated cost of the TMP elements which includes Construction Zone Enhanced Enforcement Program (COZEEP) and Portable Changeable Message Sign is \$722,500. See **Attachment F**.

Asset Management

The performance objective for this project as identified in the SHOPP Tool as follows: 112.5 lane miles of Pavement Class 1 under Program 20.xx.201.121 (Anchor), and 96,588 linear feet of MGS. Additionally, other assets include one unit of Census Station - Transportation Management Systems (TMS) under Mobility Program 20.xx.201.315 and 193.2 Locations of Vegetation Control.

The Table below provides a comparison of the impacted Asset Performance Measures in the PID and in this Project Report. The performance measures have been updated due to the change in scope of work that was done during this phase of the project.

Roadside sign upgrades and Overhead Sign Structure Replacement have been removed from this project due to funding constraints. Refer to **Attachment H** for the updated Performance Measures.

Performance Measures	Project Initiation Document Scope of Work	Project Report Scope of Work
Overhead Sign Structure	1 EA	0
Sign Panel Replacement	1 EA	0
Roadside Safety Improvements – MGS	76,800 LF	96,588 LF
Roadside Safety Improvements – Vegetation Control	153.6 Locations	193.2 Locations
Roadside Sign Upgrades	80 EA	0
Total Maximum Daily Load Mitigation (Stormwater Mitigation)	0	1.94 Acres
Maintenance Vehicle Pullout	0	2 EA

Due to the multiple emergency projects within the limits of this project, as-builts will be reflected in the PS&E phase and a Supplemental Project Report will be provided to capture any changes to the asset performance measures.

Complete Streets

This project does not include complete streets elements. There are no Americans with Disabilities Act (ADA) curb ramps, pedestrian facilities, and Park-and-Ride facilities within the project limits. Bicyclists are permitted to travel on freeway shoulders within the project limits, as there is no practicable, parallel off-system alternative along this part of the I-5 corridor for bicycle travel.

Climate Change Considerations

Green House Gas (GHG) Reduction Measures

This project will generate the following Roadway Rehabilitation GHG Emission

1. 897 MT CO₂e Unmitigated GHG Emission*
2. 9.1 MT CO₂e Annual Energy Emission Savings Due to Pavement Smoothness

Note:

* MT CO₂e - metric tons carbon dioxide equivalent. The resulting GHG emission calculation was obtained using the FHWA Carbon Estimator Tool. This is an estimate using data inputs in the planning phase, before details about specific facility dimensions, materials and construction practices are known. The tool may not be appropriated to inform engineering analysis and pavement selection. Although Caltrans will continue considering the benefits of utilizing the FHWA Carbon

Estimator Tool, at this time this estimate should not be used as a benchmark for GHG calculations in future phases of project development beyond the PID phase.

Climate Change Adaptation Measures

Climate Change Stressors:

- Fires - Installing MGS with metal posts will most likely mitigate the spread of fires of dried vegetation during the dry season.
- Floods – There is no known risk associated and this will have no impact on the project.
- Sea Level Rise - There is no known risk associated and this will have no impact on the project.

8. FUNDING, PROGRAMMING AND ESTIMATE

Funding

It has been determined that this project is eligible for federal-aid funding. This project will be submitted in the 2022 SHOPP cycle under the Minor Pavement Rehabilitation Program 20.xx.201.121.

Programming

The proposed program year is 2023/2024.

Fund Source	Programming by Fiscal Year							Current Estimate (Escalated)
20.XX.201.XX	Prior	22/23	23/24	24/25	25/26	Future	Programmed Total	At PAED Total
Component	In thousands of dollars (\$1,000)							
PA&ED Support	1,408						1,408	1,408
PS&E Support		3,159					3,159	3,159
Right-of-Way Support		115					115	137
Construction Support			6,294				6,294	6,994
Right-of-Way			297				297	290
Construction			38,778				38,778	49,176
Total		3,274	45,369				50,051	61,164

The total support to capital cost ratio is 28.1%.

Estimate

The total escalated capital outlay construction cost is estimated at \$49.176 million based on the recommended alternative. The cost exceeds the programmed amount by \$10.398 million and a Project Change Request has been approved on May 9, 2023. The cost increase is a result of the added scope identified in this project phase, including items which were not considered in the project initiation phase.

9. DELIVERY SCHEDULE

Project Milestones		Milestone Date (Month/Day/Year)	Milestone Designation (Target/Actual)
PROGRAM PROJECT	M015	07/08/22	Actual
BEGIN PAED	M020	08/15/22	Actual
PA & ED	M200	6/30/23	Target
START PS&E	M210	08/01/23	Target
PRE-60% PS&E		10/04/23	Target
60% PS&E	M313	11/15/23	Target
PRE-95% PS&E		01/19/24	Target
95% PS&E	M315	03/01/24	Target
PS&E TO DOE	M377	04/09/24	Target
DRAFT STRUCTURES PS&E	M378	N/A	
PROJECT PS&E	M380	04/28/24	Target
RIGHT OF WAY CERTIFICATION	M410	05/03/24	Target
READY TO LIST	M460	05/08/24	Target
FUND ALLOCATION	M470	06/28/24	Target
HEADQUARTERS ADVERTISE	M480	08/19/24	Target
AWARD	M495	12/02/24	Target
APPROVE CONTRACT	M500	01/06/25	Target
CONTRACT ACCEPTANCE	M600	03/03/27	Target
END PROJECT	M800	08/30/28	Target

10. RISKS

Pursuant to District Directive 35 (DD-35), risk management activities were conducted. Based on the project size, these activities included a formal quantitative risk analysis. Refer to **Attachment I** for Risk Register.

The Risk Register identifies a few risks involving design and construction. These include the risks of possible scope change during project development and risks of differing site conditions within the project area, such as differing existing pavement

conditions. Other typical risks include unanticipated hazardous waste and utility relocation.

11. EXTERNAL AGENCY COORDINATION

Federal Highway Administration (FHWA)

This project is an Assigned Project in accordance with current FHWA and Department of Transportation (Caltrans) Joint Stewardship and Oversight Agreement.

12. PROJECT REVIEWS

District Program Advisor	Md Musa	Date	5/16/23
District Maintenance	Md Musa	Date	5/16/23
HQ Project Delivery Coordinator	Robert Navarro	Date	4/21/23
Project Manager	Allen Shim	Date	5/17/23
District Safety Review	Mohammed M Islam	Date	6/05/23
Constructability Review	Kyle Kunitake	Date	4/21/23

13. PROJECT PERSONNEL

MD Musa - Senior, Pavement Program Advisor	
Shawn Enjily - Office Chief, OME	Tel: 213-269-1252
Allen Shim - Project Manager	Tel: 213-266-6134
Wayne Lee - Senior R/W Agent	Tel: 213-266-6740
Andy Liao – Office Chief, Stormwater & Landscape Architecture	Tel: 213-264-9044
	Tel: 213-793-9667
Susan Tse - Senior Env. Planner, Environmental Planning	Tel: 213-269-1106
Terry Martinez - Senior TE, Office of Design	Tel: 213-266-6236
Ayesha Mohsin – Project Engineer, Office of Design	Tel: 213-266-6230

14. ATTACHMENTS

- A. Vicinity Map (1)
- B. Typical Cross Sections (5)
- C. Environmental Document (4)
- D. Hazardous Waste Assessment (4)
- E. Right of Way Data Sheet (5)
- F. Transportation Management Plan Data Sheet (3)
- G. Cost Estimates (11)
- H. SHOPP Project Performance Output (1)
- I. Risk Register (3)
- J. Storm Water Data Report (30)
- K. List of Digout Locations (2)
- L. List of MBGR Upgrade Locations (2)

ATTACHMENT A

Vicinity Map



VICINITY MAP

On Route

07-LA-005

Primary: R59.7R/R73.7

Secondary: R59.7L/R65.4L

Between

Lake Hughes Road UC and Vista Del Lago Rd OC

ATTACHMENT B

Typical Cross Sections

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
TERRY MARTINEZ
FUNCTIONAL SUPERVISOR
AYESHA MOHSIN
REVISOR
DATE
REVISOR
DATE

NOTES:

1. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. SUPERELEVATION ARE AS SHOWN OR AS DIRECTED BY THE ENGINEER.
3. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.

EXISTING STRUCTURAL SECTION

TYPE 1E

0.65' CONCRETE PAVEMENT (RSC)
BOND BREAKER
0.35' LEAN CONCRETE BASE (RS)
0.30' CL 3 AB
0.68' CL 4 AS

TYPE 2E

0.75' CONCRETE PAVEMENT (RSC)
BOND BREAKER
0.50' LEAN CONCRETE BASE (RS)
0.30' CL 3 AB
0.45' CL 4 AS

TYPE 3E

0.20' RHMA
0.15' AC (TYPE B)
0.45' CL 3 AB
Var CL 4 AS

TYPE 4E

0.40' AND Var CONCRETE PAVEMENT (RSC)
0.35 (PM R59.7/R65.8) AC (TYPE B)
OR 0.30' (PM R65.8/R73.7) AC (TYPE B)
0.50' (PM R59.7/R65.8) CL 3 AB
OR 0.55' (PM R65.8/R73.7) CL 2 AB
Var CL 4 AS

TYPE 5E

0.20' RHMA
ASPHALT RUBBER SEAL COAT
0.20' AND Var AC
0.45' (PM R59.7/R65.8) OR 0.35' (PM R65.8/R73.7) AC (TYPE B)
0.50 (PM R59.7/R65.8) CL 3 AB OR 0.65' (PM R65.8/R73.7) CL 2 AB
Var CL 4 AS

TYPE 6E

0.20' RHMA
ASPHALT-RUBBER SEAL COAT
0.20' AC
Var AC LEVELING COURSE
0.67' PCC
0.35' CL B CTB
0.30 (PM R59.7/R65.8) OR 0.48' (PM R65.8/R73.7) CL 3 AB
0.68' (PM R59.7/R65.8) OR 0.50' (PM R65.8/R73.7) CL 4 AS

TYPE 7E

0.20' RHMA
ASPHALT-RUBBER SEAL COAT
0.20' AC
Var AC LEVELING COURSE
0.75' PCC
0.50' CL A CTB
0.30 (PM R59.7/R65.8) OR 0.25' (PM R65.8/R73.7) CL 3 AB
0.45' (PM R59.7/R65.8) OR 0.50' (PM R65.8/R73.7) CL 4 AS

TYPE 8E

0.20' RHMA
ASPHALT RUBBER SEAL COAT
0.20' AND Var AC
0.45' (PM R59.7/R65.8) OR 0.35' (PM R65.8/R73.7) AC (TYPE B)
0.50 (PM R59.7/R65.8) CL 3 AB OR 0.65' (PM R65.8/R73.7) CL 2 AB
Var CL 4 AS

TYPE 9E

0.25' RHMA-G
0.10' AC (TYPE B)
0.65' CL 2 AB
1.00 CL 4 AS

TYPE 10E

0.25' RHMA-G
0.35' CL 2 AB
Var CL 4 AS

TYPE 11E

0.10' HMA-TYPE B
0.00' - 0.10' AC
PCC

TYPE 12E

0.35' CONCRETE PAVEMENT (RSC)
0.45' CL 3 AB
Var CL 4 AS

TYPE 13E

0.75' CONCRETE PAVEMENT (RSC)
0.50' LEAN CONCRETE BASE (RSC)
Var CL 4 AS

TYPE 14E

0.20' RHMA-G
0.20' HMA (TYPE C)
Var AC LEVELING COURSE
0.75' PCC
0.50' CL A CTB
0.30 (PM R59.7/R65.8) OR 0.25' (PM R65.8/R73.7) CL 3 AB
0.45' (PM R59.7/R65.8) OR 0.50' (PM R65.8/R73.7) CL 4 AS

STRUCTURAL SECTION

TYPE 1

0.20' RHMA-G
COLD PLANE 0.20' RHMA OR RHMA-G

TYPE 2

0.35' HMA-A
COLD PLANE 0.35' ASPHALT CONCRETE PAVEMENT

TYPE 3

0.25' HMA-A
COLD PLANE 0.25' ASPHALT CONCRETE PAVEMENT

TYPE 4

0.75' JPCP or JPCP-RSC
1.00' CL 3 AB

TYPE 5

0.10' HMA-A
COLD PLANE 0.10' ASPHALT CONCRETE PAVEMENT

TYPE 6

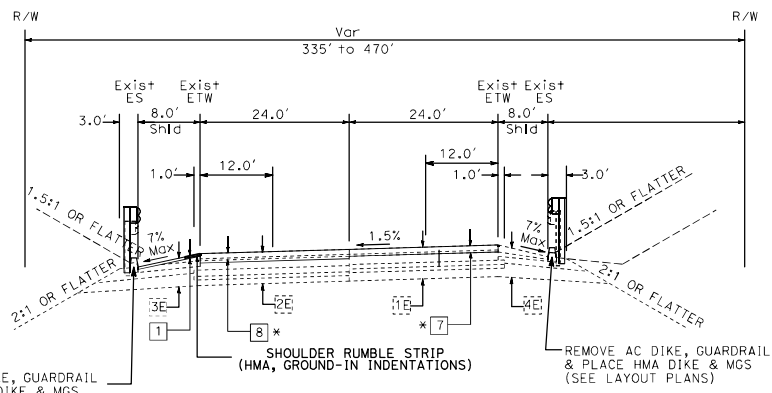
0.20' RHMA-G
0.20' HMA-A

TYPE 7

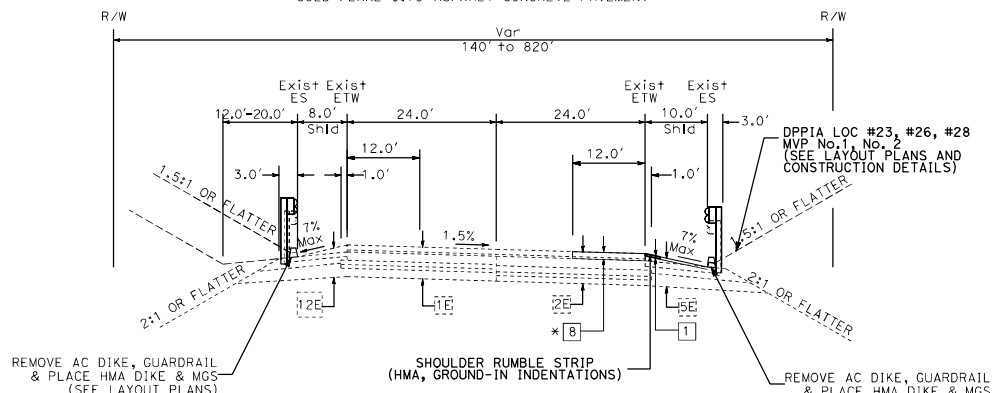
0.65' ISR-RSC
BASE BOND BREAKER
0.35' LCB-RS

TYPE 8

0.75' ISR-RSC
BASE BOND BREAKER
0.50' LCB-RS



SOUTHBOUND
PM 59.7 TO PM 60.0
*DIGOUT PM 59.9
(SEE LAYOUT PLANS)



NORTHBOUND
PM 59.7 TO PM 61.3
*DIGOUT PM 60.5
(SEE LAYOUT PLANS)

TYPICAL CROSS SECTIONS
NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
Caltrans

FUNCTIONAL SUPERVISOR
TERRY MARTINEZ

CALCULATED BY
DESIGNED BY

CHECKED BY

REVISOR
AYESHA MOHSIN

REVISION
DATE

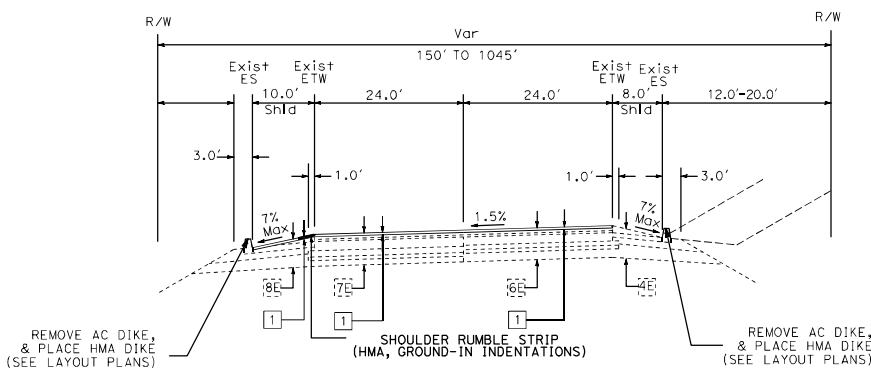
- NOTES
1. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
 2. SUPERELEVATION ARE AS SHOWN OR AS DIRECTED BY THE ENGINEER.
 3. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL No. SHEETS
07	LA	5	R59.7R/R73.7	

REGISTERED CIVIL ENGINEER DATE

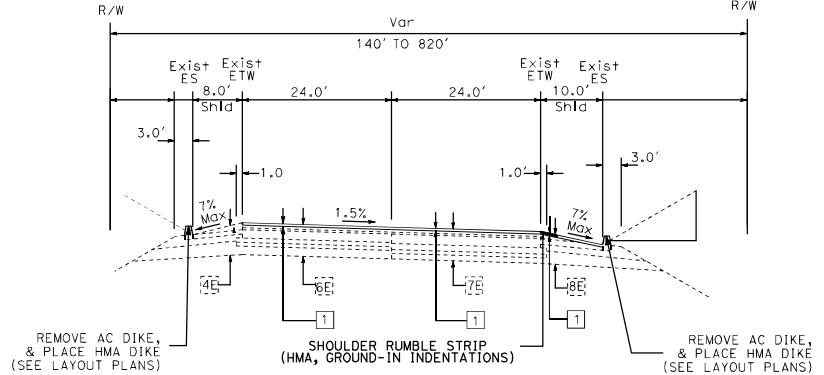
PLANS APPROVAL DATE

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SOUTHBOUND

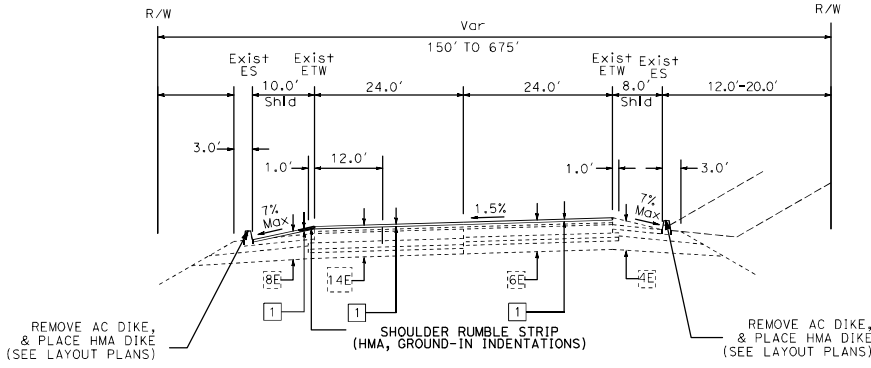
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PM R63.2 TO PM R64.9
PM R67.1 TO PM R69.6



NORTHBOUND

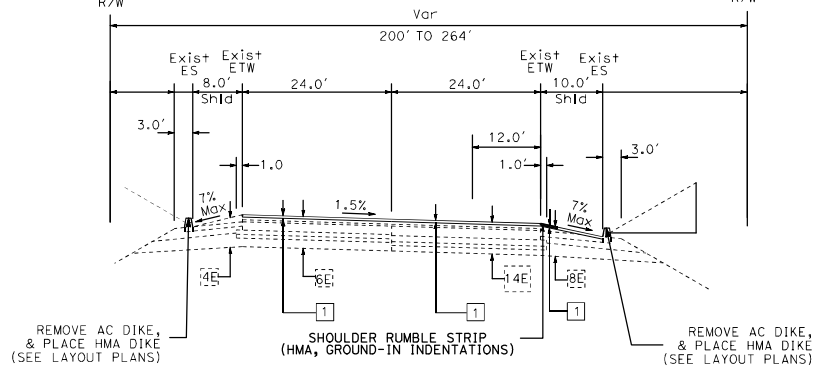
PM R61.3 to PM R64.9
PM R67.1 to PM R67.6

ROUTE 5



SOUTHBOUND

PM R62.9 TO PM R63.2



NORTHBOUND

PM R67.6 TO PM R69.6

ROUTE 5

TYPICAL CROSS SECTIONS
NO SCALE

X-2

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
Gallardo
FUNCTIONAL SUPERVISOR
TERRY MARTINEZ
CALCULATED BY
DESIGNED BY
CHECKED BY
AYESHA MOHSIN
REVISOR
DATE
REVISED BY
DATE
REVISED

- NOTES:
- 1. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
 - 2. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5	R59.7R/R73.7		

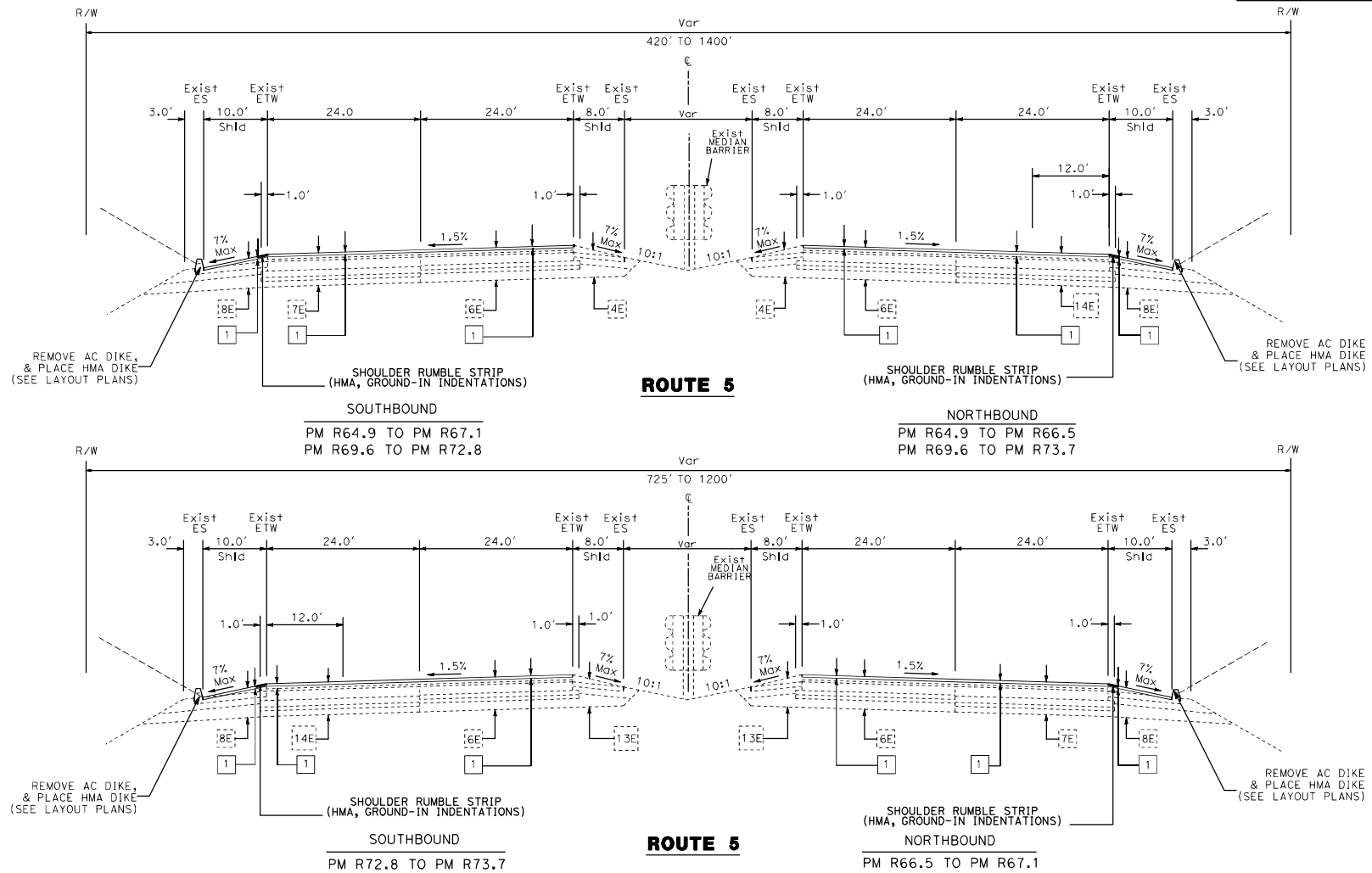
REGISTERED CIVIL ENGINEER

DATE

PLANS APPROVAL DATE

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PROFESSIONAL ENGINEER
No.
Exp.
CIVIL
STATE OF CALIFORNIA



TYPICAL CROSS SECTION
NO SCALE

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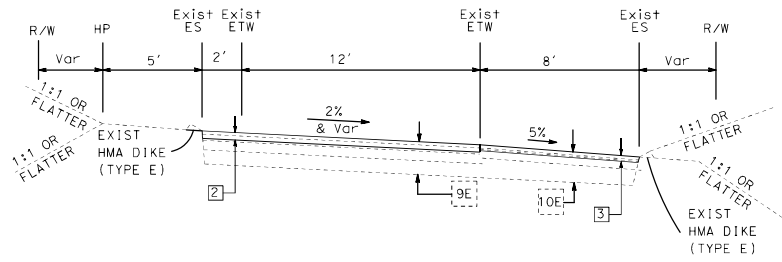
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
TERRY MARTINEZ
FUNCTIONAL SUPERVISOR
CHECKED BY
DESIGNED BY
AYESHA MOHSIN
REVISOR
DATE

NOTES:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

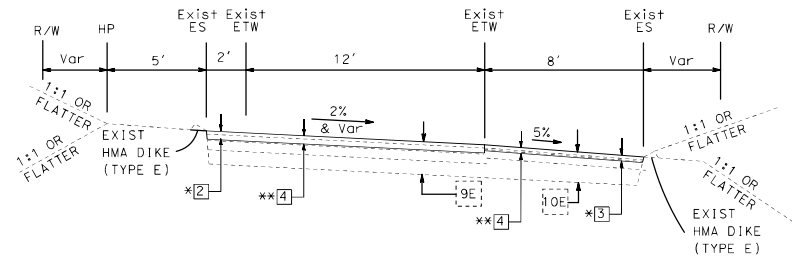
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	5	R59.7R/R73.7		

REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS
OR AGENTS SHALL NOT BE RESPONSIBLE FOR
THE ACCURACY OR COMPLETENESS OF SCANNED
COPIES OF THIS PLAN SHEET.

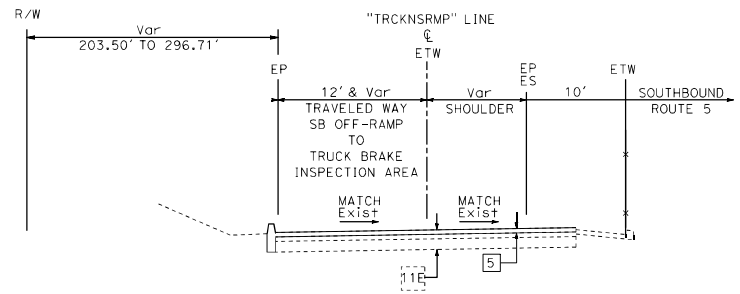
REGISTERED PROFESSIONAL ENGINEER
No.
Exp.
CIVIL
STATE OF CALIFORNIA



TEMPLIN HWY ON RAMP
SOUTHBOUND
"TEMRE5" LINE
STA 55+00.0 TO STA 66+50.10
NORTHBOUND
"TEMRE5" LINE
STA 68+34.3 TO STA 78+98.10



TEMPLIN HWY OFF RAMP
SOUTHBOUND
"TEMRS5" LINE
*STA 68+17.53 TO STA 70+17.53
*STA 70+17.53 TO STA 82+62.85
NORTHBOUND
"TEMRJ5" LINE
*STA 56+84.89 TO STA 65+73.00
*STA 65+73.00 TO STA 67+73.00



TRUCK BRAKE INSPECTION SB OFF-RAMP
SOUTHBOUND
"TRCKNSRMP" LINE
STA 50+50 TO STA 66+00
STA 47+82.66 TO STA 52+69.05
(PM 67.8)

TYPICAL CROSS SECTION
NO SCALE

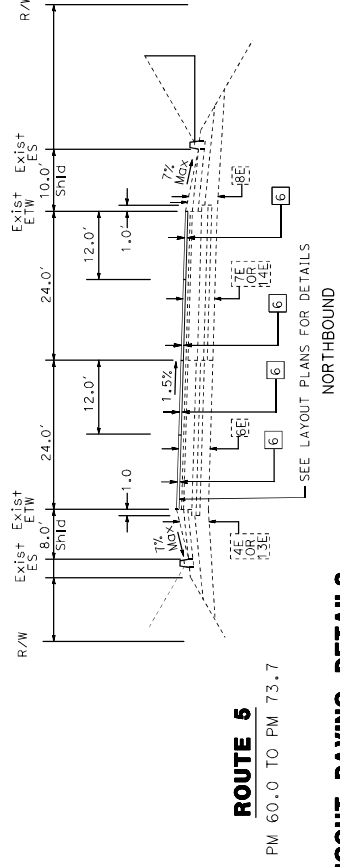
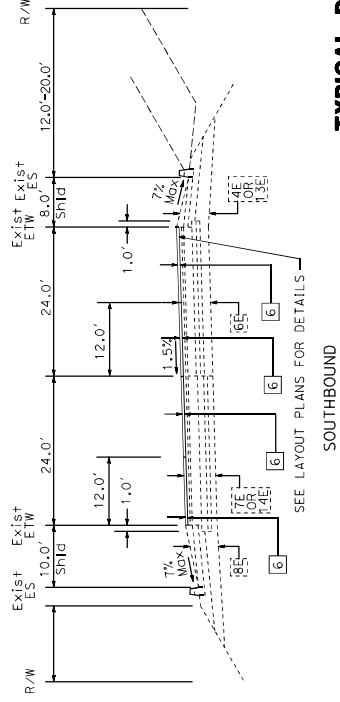
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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED BY AYESHA MOHSIN	REVISOR BY		
	TERRY MARTINEZ	CHECKED BY	DATE REVISED		

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. SEE LAYOUT PLANS FOR DETAILS.



ROUTE 5

PM 60.0 TO PM 73.7

TYPICAL DIGOUT PAVING DETAILS

(SEE LAYOUT PLANS FOR DIGOUT LOCATIONS AND LANES)

TYPICAL CROSS SECTIONS
NO SCALE
X-5

ATTACHMENT C
Environmental Document



**CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION
DETERMINATION FORM (rev. 04/2022)**

Project Information

Project Name (if applicable): Pavement Preservation Project

DIST-CO-RTE: 07-LA-005

PM/PM: R59.7R/R73.7

EA: 37040

EFIS: 0720000128

Federal-Aid Project Number: N/A

CE#: 202209003

Project Description

The Office of Design B is preparing a Project Report for the I-5 Minor Pavement Rehabilitation-MPR Project along Route 5 in Los Angeles County, from 0.2 miles North of Lake Hughes Road Undercrossing (PM R59.7R) to 0.7 miles South of Vista Del Lago Road Overcrossing (PM R73.7). The scope of the project includes cold plane and overlay on freeway mainline, shoulder, and ramps. The Project will also reconstruct asphalt concrete dikes on mainline and ramps, install rumble strips on mainline inside and outside shoulder, install ramp termini at NB Templin Highway off-ramp and SB Templin Highway off-ramp, and upgrade the existing MBGR to MGS. Excavation is proposed to a depth of 2" minimum (3.5" maximum) for vegetation control and 8' steel posts will be used for MGS installation. Three DPPIAs (Design Pollution Prevention Infiltration Area) will also be constructed. As a result, MVP (Maintenance Vehicle Pullout) and a short retaining wall may be needed. No public utility relocation is anticipated, and no new right-of way will be acquired for the project.

Caltrans CEQA Determination (Check one)

- ☐ **Not Applicable** – Caltrans is not the CEQA Lead Agency
☐ **Not Applicable** – Caltrans has prepared an IS or EIR under CEQA

Based on an examination of this proposal and supporting information, the project is:

- ☐ **Exempt by Statute.** (PRC 21080[b]; 14 CCR 15260 et seq.)
☒ **Categorically Exempt. Class 1(c)** (PRC 21084; 14 CCR 15300 et seq.)
 ☐ No exceptions apply that would bar the use of a categorical exemption (PRC 21084 and 14 CCR 15300.2). See the [SER Chapter 34](#) for exceptions.
☐ **Covered by the Common Sense Exemption.** This project does not fall within an exempt class, but it can be seen with certainty that there is no possibility that the activity may have a significant effect on the environment (14 CCR 15061[b][3].)

Senior Environmental Planner or Environmental Branch Chief

Christopher Laurel (Acting)

Print Name

Christopher Laurel

Signature

4/20/2023

Date

Project Manager

Allen Shim

Print Name

Allen Shim

Signature

4/20/2023

Date



CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION DETERMINATION FORM

Caltrans NEPA Determination (Check one)

☐ **Not Applicable**

Caltrans has determined that this project has no significant impacts on the environment as defined by NEPA, and that there are no unusual circumstances as described in 23 CFR 771.117(b). See [SER Chapter 30](#) for unusual circumstances. As such, the project is categorically excluded from the requirements to prepare an EA or EIS under NEPA and is included under the following:

☒ **23 USC 326:** Caltrans has been assigned, and hereby certifies that it has carried out the responsibility to make this determination pursuant to 23 USC 326 and the Memorandum of Understanding dated April 18, 2022, executed between FHWA and Caltrans. Caltrans has determined that the project is a Categorical Exclusion under:

☒ **23 CFR 771.117(c): activity (c)(26)**

☐ **23 CFR 771.117(d): activity (d)(Enter activity number)**

☐ **Activity Enter activity number listed in Appendix A of the MOU between FHWA and Caltrans**

☐ **23 USC 327:** Based on an examination of this proposal and supporting information, Caltrans has determined that the project is a Categorical Exclusion under 23 USC 327. The environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 USC 327 and the Memorandum of Understanding dated December 23, 2016 and executed by FHWA and Caltrans.

Senior Environmental Planner or Environmental Branch Chief

Christopher Laurel (Acting)

Print Name

Christopher Laurel

Signature

4/20/2023

Date

Project Manager/ DLA Engineer

Allen Shim

Print Name

Allen Shim

Signature

4/20/2023

Date

Date of Categorical Exclusion Checklist completion (if applicable): N/A

Date of Environmental Commitment Record or equivalent: 04/20/23

Briefly list environmental commitments on continuation sheet if needed (i.e., not necessary if included on an attached ECR). Reference additional information, as appropriate (e.g., additional studies and design conditions).



CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION DETERMINATION FORM

Continuation sheet:

General

- If there are any changes to the proposed undertaking, an additional review by the Division of Environmental Planning will be required.
- The Division of Environmental will be provided the Project Specifications and Expenditures Package for review and comments.

Air Quality

- NSSP 14-9.05 Air Quality Control District Jurisdictions must be included in the final special provisions.

Biology

- Prior to the start of construction, all drain inlets must be protected with Best Management Practices to prevent paint, cleaning materials, and other debris from entering drainage courses.
- All appropriate Stormwater and Erosion Control Best Management Practices will be incorporated into the project specifications.
- All pollution and litter laws and regulations will be followed by the contractor and all personnel on site.

Cultural

- If previously unidentified cultural materials are unearthed during construction, work must be halted in that area until a qualified archaeologist can assess the significance of the find.

Hazardous Waste

- A project specific ADL investigation will be necessary during the PS&E phase. An investigation will take four months to conduct. Please allow sufficient time in the project schedule do the investigation.
- The Contractor will be required to prepare a project specific Lead Compliance Plan (LCP) to protect workers and the public from exposure to lead hazards. The LCP must be signed and sealed by a Certified Industrial Hygienist (CIH).
- These activities will disturb soils only in the immediate area of the activity. Contaminated material subject to minimal disturbance must remain in the immediate area of disturbance and shall not be transported elsewhere or disposed of outside of the highway. The Standard Special Provision SSP 14-11.09 – Minimal Disturbance of Earth Material Containing Lead will be provided for the PS&E Package.
- Potential presence of regulated concentrations of ADL exists in soils along the project corridor. The project is anticipated to generate excess soil requiring disposal and Provision SSP 14-11.08 (Regulated Material Containing Aerially Deposited Lead) will be provided for the PS&E Package.
- Material used for backfilling must be tested and free of contaminants under section 6-1.03.



CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION DETERMINATION FORM

Noise

- Section 14-8.02, Sound Control Requirements, of Caltrans standard specifications states that construction noise levels should not exceed sustained 86 dBA at 50 feet from the job site activities from 9 p.m. to 6 a.m. These requirements also state that noise levels generated during construction shall comply with applicable local, state, and federal regulations.

ATTACHMENT D
Hazardous Waste Assessment


Memorandum

*Making Conservation
A California Way of Life.*

To: Susan Tse
Senior Environmental Planner
Office of Environmental Planning

Date: April 17, 2023

File: 07-LA-005
PM R59.7/PM R73.7
Minor Pavement Rehabilitation

From: HENRY JONES, PG 
Senior Engineering Geologist
Hazardous Waste Unit, North Region
Office of Environmental Engineering

EA: 07-370400
E-FIS: 0720000128

Subject: PRELIMINARY HAZARDOUS WASTE ASSESSMENT PA&ED

This is in response to your memo dated July 05, 2022, requesting a hazardous waste assessment as part of the preparation of the PA&ED for a Minor Pavement Rehabilitation Project in Los Angeles County on the Interstate 5. The project consists of various types of work from 0.2 mile North of Lake Hughes Road Undercrossing (PM R59.7R) to 0.7 mile South of Vista Del Lago Road Overcrossing (PM R73.7). The original project scope of work is:

1. Cold plane 0.20' Asphalt Concrete (AC) section and overlay 0.20' of Rubberized Hot Mix Asphalt-Type G (RHMA-G) on freeway mainline and shoulder
2. Cold plane 0.20' Asphalt Concrete (AC) section and overlay 0.20' of Hot Mix Asphalt-Type A (HMA-A) on ramps
3. Reconstruct Asphalt Concrete dikes on mainline and ramps
4. Install rumble strips on mainline inside and outside shoulder
5. Install ramp termini at NB Templin Highway off-ramp and SB Templin Highway off-ramp
6. Remove and replace one (1) overhead sign structure at PM 73.201 in the NB direction
7. Upgrade the existing MBGR to MGS
8. Upgrade Roadside Signs

All work will be performed and completed within existing State Right-of-Way (R/W). In reviewing the preliminary project draft layout sheets provided by Office of Design B, the hazardous waste concerns are as follows:

Change of Scope

A new hazardous waste request memo has not been submitted following the change in the scope of work during an executive meeting in March 2023. The changes have been communicated to our office via email from Joben Penuliar, Environmental Planner, on March 3, 2023. The new scope of work includes:

1. Cold plane and overlay on freeway mainline, shoulder, and ramps
2. Reconstruct asphalt concrete dikes on mainline and ramps
3. Install rumble strips on mainline inside and outside shoulder
4. Install ramp termini at NB Templin Highway off-ramp and SB Templin Highway off-ramp

5. Upgrade the existing MBGR to MGS.
6. Vegetation control and 8' steel posts will be used for MGS installation.
7. Three DPPIAs (Design Pollution Prevention Infiltration Area).
8. MVP (Maintenance Vehicle Pullout) where a short retaining wall may be constructed

In addition, design has removed the overhead sign structure replacement work along with all of the roadside sign upgrades. No public utility relocation is anticipated, and no new right-of way will be acquired for the project.

Treated Wood Waste

Design must notify OEE if treated wood waste (TWW) is being generated for the project. Based on existing information the project is anticipated to generate TWW.

The wood guardrail posts and signs are treated with chemical preservatives. Arsenic, chromium, copper, and pentachloro-phenol are among the chemicals added to preserve wood. Once these wood posts are removed and become waste, they are treated wood waste. TWW is non-RCRA (California) hazardous waste, and the handling, storage, transportation, and disposal are subject to California hazardous waste regulations.

If TWW will be generated, OEE will provide the appropriate Standard Special Provisions for handling, storing, transporting, and disposing of TWW. For disposal estimates, please refer to the latest Contract Cost Database (<http://sv08web/contractcost/>) and allocate appropriate funds for disposal of TWW and the Board of Equalization (BOE) fee.

Removal of Existing Yellow/White Traffic Stripes and/or Pavement Markings Containing Lead:

The project will include the removal existing traffic striping by cold plane grinding, or via similar construction activities such as saw cutting and removal of asphalt concrete pavement or grinding during installation of rumble strips. The project-specific LCP should address how the waste is handled.

White, and non-yellow thermoplastic, paint stripes, and pavement markings contain low concentrations of lead. Residue from the removal of white and non-yellow thermoplastic, paint stripes, and pavement markings is classified as non-hazardous waste.

Yellow thermoplastic and paint stripes, and pavement markings may contain lead and chromium at hazardous waste concentrations. Residue produced when these materials are removed by itself contain heavy metals at concentrations that exceeds hazardous waste threshold levels established by the California Code of Regulations (CCR) and may produce toxic fumes when heated. Removal of such materials shall be properly collected, store, transported and disposed of at a permitted Class I facility in accordance with State and Federal requirements.

Aerially Deposited Lead in Soil

Exposed soils along roadways may be impacted by Aerially Deposited Lead (ADL) due to historic use of lead compounds in gasoline. ADL impacts in soils are generally present laterally up to 30 feet from the edge of the paved road and to depths of two feet below ground surface (ft-bgs), sometime extending to five ft-bgs. Caltrans has specific requirements for assessment, management, transportation, and disposal of ADL impacted soils pursuant to the Soil Management Agreement with the Department of Toxic Controlled Substances (DTSC).

The project will disturb exposed soils with the following activities that are considered minimal disturbance activities under the ADL Agreement:

- Installing and removing Temporary Construction signs
- Minor disturbance of soils immediately adjacent to roadway shoulder replacing HMA-A dike
- Vegetation control and MGS installation related activities

These activities will disturb soils only in the immediate area of the activity. Contaminated material subject to minimal disturbance must remain in the immediate area of disturbance and shall not be transported elsewhere or disposed of outside of the highway. The Standard Special Provision SSP 14-11.09 – Minimal Disturbance of Earth Material Containing Lead will be provided for the PS&E Package.

Potential presence of regulated concentrations of ADL exists in soils along the project corridor. The project is anticipated to generate excess soil requiring disposal due to the following activities:

- Install ramp termini at NB Templin Highway off-ramp and SB Templin Highway off-ramp
- Three DPPIAs (Design Pollution Prevention Infiltration Area).
- MVP (Maintenance Vehicle Pullout) where a short retaining wall may be constructed

Provision SSP 14-11.08 Regulated Material Containing Aerially Deposited Lead will be provided for the PS&E Package.

Import Borrow

Material used for backfill must be tested and free of contaminants under section 6-1.03.

Recommendations

Due to the age of the route and traffic volume, regulated levels of ADL are suspected to be present. Based on the planned work, there does exist the potential of generating excess soil during the installation of the ramp termini where the structural section is thicker than the existing section or where there are changes in the daylight catch points. Therefore, to make a conservative estimate for the purpose of securing adequate funding, we recommend:

1. A project specific ADL investigation will be necessary during the PS&E phase. An investigation will take four months to conduct. Please allow sufficient time in the project schedule do the investigation.
2. The Contractor will be required to prepare a project specific Lead Compliance Plan (LCP) to protect workers and the public from exposure to lead hazards. The LCP must be signed and sealed by a Certified Industrial Hygienist (CIH). Please allocate appropriate funds for preparation of the LCP.

The cost is approximately \$350 per cubic yard for soil disposal at a Class I facility in California. Please refer to the latest contract Cost Database at <http://sv08data.dot.ca.gov/contractcost/> for cost estimate of engineering items related to hazardous waste related engineering items.

Questions and Contact

This hazardous waste assessment is for the scope of work described above. Any changes made to the scope of work will require a Hazardous Waste Re-Assessment. Please inform us of any changes in the work scope. Should you have any questions, please contact me at (213) 269-1118, Henry.Jones@dot.ca.gov or one of my staff, Diyar Saadi at (213) 269-1870, Diyar.saadi@dot.ca.gov

Cc: Tse, Susan, Senior Environmental Planning
Joben Penuliar, Environmental Planning
Ayesha Mohsin, Project Engineer
Allen Shim, Project Manager

ATTACHMENT E

Right of Way Data Sheet

Memorandum

*Serious Drought!
Help Save Water!*

To: Terry Martinez, Design Manager
Office of Design
District 7, Los Angeles Office

Date: 5/23/2023
EA: 37040
Data Sheet ID NO: ds6191
Project ID # 0720000128

From: Zoltan Elo, Office Chief
Right of Way Appraisals, and Planning & Management
District 7, Los Angeles Office

Subject: Current Estimated Right of Way Costs for **Project Report**

We have completed an estimate of the Right of Way costs for the above referenced project based on information received from Ayesha Mohsin, PE and the following assumptions and limiting conditions apply:

- The mapping did not provide sufficient detail to determine the limits of the right of way required.
- The transportation facilities have not been sufficiently designed, so our estimator could not determine the damages to any of the remainder parcels affected by the project.
- Additional right of way requirements are anticipated, but are not defined due to the preliminary nature of the estimate.

Right of Way Certificate (RWC) lead time will require a minimum of NA after maps to appraisal (MA). Completed Appraisal maps include HMDD, COS, HW Memo, and RE-49. An executed copy of the new freeway agreement is required for the project. When utility relocation is warranted, utility conflict maps will be required. Additionally a minimum of NA will be required after receiving the last revision to the appraisal map. Shorter lead times will require either more right of way resources or an increased number of condemnation suits to be filed and present a risk to the RWC project delivery milestone. Due to the passage of Map 21 and the Buy America provision, the Right of Way Certification process will be longer, if Utility Relocation is necessary.

Current Schedule: PRSM

PAED (M 200)	MA (M 224)	RWC (M 410)	RTL (M 460)	CCA (M 600)
6/30/2023	N/A	5/3/2024	5/8/2024	3/3/2027

TO Terry Martinez
ATTN Ayesha Mohsin

R/W DATA SHEET

ID NO ds6191

SENIOR R/W P&M Allen Shim

Date of Data Sheet 5/23/2023

ROUTE 5

PM_KM R59.7R/R73.7

EA 37040

Project ID # 0720000128

ALT

Project Description This project is a pavement rehabilitation project to preserve, repair, and extend the service life of the pavement, improve pavement structural integrity, and improve ride quality. The objective is to improve safety and upgrade assets to current standards.

This cost estimate is valid for the above scoping report only. This is an estimate only and not an appraisal. It may be based on worse case scenarios.

The estimate is subject to change and revision.

The mapping did not provide sufficient nor adequate detail to determine the limits of the Right of Way required and effects on the improvements.

The transportation facilities have not been sufficiently designed for our estimator to determine the damages to any of the remainder parcels affected by the project.

This cost estimate is pursuant to the following responses supplied by Terry Martinez to the Data Sheet Request Form.

	YES	NO	Not known at this time
Utilities are depicted on plans		x	
Railroads are depicted on plans		x	
There are Material and/or Disposal Sites Required			
Caltrans will do the Right of Way work	x		
There will be a Cooperative Agreement		x	
This is a reimbursable project		x	
There is Hazardous Waste potential	x		

RW COST ESTIMATE

CURRENT VALUE ESCALATED VALUE

R/ w acq.(incl.contingency
G.w-condem.-adm.s'tl.)Permits

Clearance

RAP (cont rate.)

Escrow costs (cont rate.)

Utility relocation costs

Estimate of Reimbursed Appraisal Fee

Total estimated cost

No Right of Way

\$212,000

\$289,337

\$212,000

\$289,337

Escalation Rate Rw .07

Escalation Rate Utilities .08

Cert.date 5/3/24

ROUTE 5

PM_KM R59.7R/R73.7

EA 37040

ALT

Parcel Count and Py Info

PARCEL DUAL TYPES APPR.		
A		
B		
C		
D		
F		

RIGHTS NEEDED	
FEE	
EASE	
TCE	

TAKES	
FULL	
PART	
TOTAL	

DISPLACEMENT OF UNITS	
SFR	
BUS	
MULTI	

PARCELS WITH RAP	

POTENTIAL CLEARANCE PARCELS	

POTENTIAL CONDEMNATION PARCELS	

POTENTIAL EXCESS PARCELS	

UTILITY IMPACTS	
u4-1	
u4-2	
u4-3	
u4-4	
u5-7	
u5-8	
u5-9	

Estimate Of Right Of Way Support Hours

Activity Codes	Function	Hours
225 & 245	Appraisals	
225 & 245	Acquisitions	
200	Utilities	
185.20.40	Utility Potholing	1,215
205	Railroads	
225 & 245	Condemnation	
225 & 245	Clearance	
225 & 245	Relocation	
220 & 300	RW Engineering	
	Total	1,215

UTILITY INFORMATION**Please See the Utility Conflict Addendum for Complete Utility Information**Are utility easements required? NoAre Utility agreements required? NoTotal Current Cost \$212,000Const. Completion Date 3/30/2027Utility Escalation Rate 8%Total Escalated Cost \$289,337

ROUTE 5

PM_KM R59.7R/R73.7

EA 37040

ALT

RR INFORMATIONAre RR affected NoneDescribe affected
RR None

When Branch Lines Or Spurs Are Affected ,would Acquisition And Or Payment Of Damages To Businesses And Or Industries Served By The Railroad Facility Be More Cost Effective Than Service Contracts ,or Grade Separations Requiring Construction And Maintenance Agreements Involved?

0Explain Branch lines N/A

Discuss Types Of Agreements And Rights Required From The Railroads, Are Grade Xing Requiring Service Contracts ,or Grade Separations Requiring Construction And Maintenance Agreements Involved.

N/ARAILROAD COST PERTAINING TO CONSTRUCTION ACTIVITY

The cost of flagging related to project construction activity is a Phase 4 cost (construction contract cost). Though noted on the RW data sheet, the estimated flagging cost is not a RW cost, and is not a part of RW Capital.. The estimate is provided so it can be added to the engineer's estimate for construction – the RR flagging estimate is based on days needed for construction activity.

		<u>DATE</u>
Right of Way Estimate prepared by	<u>Victor Lee</u>	<u>5/23/23</u>
Railroad Estimate prepared by	<u>Mario Zamorano</u>	<u>3/6/23</u>
Utilities Estimate prepared by	<u>Michele Graves</u>	<u>3/16/23</u>

I have personally reviewed this R/W Data Sheet and all supporting information I certify that the probable highest and best use estimated values and assumptions are reasonable and proper subject to the limiting conditions set forth and I find this Data Sheet complete and current.

This Data Sheet is not to be signed by Chief unless accompanied by final scoping report(PR,PSR,PSSR) for review and/or signature.

CHIEF


05/25/2023

Utility Conflicts
Id- ds6191
EA- 37040

	Description	Quantity	\$/Unit	Total Cost
1	Pothole 10" Crude Oil, Mobile, at PM 73.2, Location 37 (ea)	2	2000	4000
2	Pothole 2 Bur Tel AT&T, Mobil, at PM 73.2, Location 37 (ea)	2	2000	4000
3	Pothole 22" Gas, SCG, at PM 73.54, Location 36 (ea)	2	2000	4000
4	Pothole 26" Gas, SCG, at PM 73.54, Location 36 (ea)	2	2000	4000
5	Pothole 14" Oil Arco, at PM 73.54, Location 36 (ea)	2	2000	4000
6	Pothole 10" Gas, Arco, at PM 73.54, Location 36 (ea)	2	2000	4000
7	Pothole underground facilities, CenturyLink, from PM R59.7R to	16	2000	32000
8	Pothole underground facilities, CenturyLink, at PM R63.8L, Location	2	2000	4000
9	Pothole underground facilities, CenturyLink, from PM R64.7R to	2	2000	4000
10	Pothole underground facilities, CenturyLink, at PM R66.0, Location	4	2000	8000
11	Pothole Water, SCV, at PM R59.7, Location 62 (ea)	2	2000	4000
12	Pothole Water, SCV, at PM R59.7, Location 62 (ea)	2	2000	4000
13	Pothole 8" Oil Pipeline, Torrance Logistics, from PM R59.7R to	4	2000	8000
14	Pothole 8" Oil Pipeline, Torrance Logistics, from PM R59.7L to	4	2000	8000
15	Pothole 16" Crude Oil Pipeline, Torrance Logistics, from PM R59.7R	4	2000	8000
16	Pothole Buried Cable, Verizon Business, at PM R66.0, Locations 27,	4	2000	8000
17	Pothole Buried Cable, Verizon Business, at PM R73.7, Location 36	2	2000	4000
18	Pothole Buried Cable, PT&T, from PM R60.0R to R64.4R, Locations 3	36	2000	72000
19	Pothole Buried Cable, PT&T, from PM R60.0L to R64.4L, Locations 55	12	2000	24000

ATTACHMENT F

Transportation Management Plan

Data Sheet

TRANSPORTATION MANAGEMENT PLAN DATA SHEET (Preliminary TMP Elements and Costs)

Co/Rte/PM LA/05/R59.7R-R73.7 EA 07-370400 Alternative No. 2

Project Limit From 0.2 mile north of Lake Hughes Ave to 0.7 mile south of Vista De Lago Rd

Project Description Pavement Rehabilitation and Preservation project consisting of cold plane and overlay, ramp termini installation and guard rails

1) Public Information

- | | | | |
|-------------------------------------|--------------------------------------|--|------------|
| <input type="checkbox"/> | a. Brochures and Mailers | | |
| <input checked="" type="checkbox"/> | b. Press Release | | |
| <input type="checkbox"/> | c. Paid Advertising | | |
| <input type="checkbox"/> | d. Public Information Center/Kiosk | | |
| <input type="checkbox"/> | e. Public Meeting/Speakers Bureau | | |
| <input type="checkbox"/> | f. Telephone Hotline | | |
| <input type="checkbox"/> | g. Internet | | |
| <input checked="" type="checkbox"/> | h. Others <u>Fact sheets, Fliers</u> | | <u>\$0</u> |

2) Motorists Information Strategies

- | | | | |
|-------------------------------------|--|--|----------------------|
| <input checked="" type="checkbox"/> | a. Changeable Message Signs (Fixed) | | <u>\$0</u> |
| <input checked="" type="checkbox"/> | b. Changeable Message Signs (Portable) | | <u>See Note No.5</u> |
| <input type="checkbox"/> | c. Ground Mounted Signs | | |
| <input type="checkbox"/> | d. Highway Advisory Radio | | |
| <input type="checkbox"/> | e. Caltrans Highway Information Network (CHIN) | | |
| <input type="checkbox"/> | f. Others _____ | | |

3) Incident Management

- | | | | |
|-------------------------------------|--|--|---------------------|
| <input checked="" type="checkbox"/> | a. Construction Zone Enhanced Enforcement Program (COZEEP) | | <u>\$720,000.00</u> |
| <input type="checkbox"/> | b. Freeway Service Patrol | | |
| <input type="checkbox"/> | c. Traffic Management Team | | |
| <input type="checkbox"/> | d. Helicopter Surveillance | | |
| <input type="checkbox"/> | e. Traffic Surveillance Stations (Loop Detector and CCTV) | | |
| <input type="checkbox"/> | f. Others _____ | | |

4) Construction Strategies

- ☒ a. Lane Closure Chart
☐ b. Reversible Lanes
☐ c. Total Facility Closure
☐ d. Contra Flow
☐ e. Truck Traffic Restrictions
☒ f. Reduced Speed Zone
☐ g. Connector and Ramp Closures
☐ h. Incentive and Disincentive
☐ i. Moveable Barrier
☐ j. Others _____

5) Demand Management

- ☐ a. HOV Lanes/Ramps (New or Convert)
☐ b. Park and Ride Lots
☐ c. Rideshare Incentives
☐ d. Variable Work Hours
☐ e. Telecommute
☐ f. Ramp Metering (Temporary Installation)
☐ g. Ramp Metering (Modify Existing)
☐ h. Others _____

6) Alternative Route Strategies

- ☐ a. Add Capacity to Freeway Connector
☐ b. Street Improvement (widening, traffic signal... etc)
☐ c. Traffic Control Officers
☐ d. Parking Restrictions
☐ e. Others _____

7) Other Strategies

- ☐ a. Application of New Technology
☐ e. Others _____

TOTAL ESTIMATED COST OF TMP ELEMENTS =


\$ 720,000.00

Project Notes:

1. This project is on Route 5 from 0.2 mile north of Lake Hughes Ave to 0.7 miles south of Vista Del Lago Rd (PM R59.7R – R73.3). The estimated construction cost for this project is about \$31 million and construction is scheduled to begin in Summer 2025 and completed by Summer 2026.
2. The project scope of work involves the following:
 - Cold plane existing 0.20' Asphalt Concrete (AC) on mainline and shoulder section and overlay with 0.20' of Rubberized Hot Mix Asphalt-Type G (RHMA-G).
 - Cold plane 0.20' AC section on ramps and overlay with 0.20' Hot Mix Asphalt-Type A (HMA-A).
 - Reconstruct AC dikes on mainline and ramps and install rumble strips along the mainline shoulder.
 - Install ramp termini at NB Templin Hwy off-ramp and SB Templin Hwy off-ramp.
 - Upgrade existing Metal Beam Guard Rail (MBGR) to Midwest Guardrail System (MGS).
3. Install terminal systems (Flared/In-line) and transition railings.
4. The COZEEP cost estimate of \$720,000 was provided by the Caltrans Construction Traffic Advisor.
5. PCMS cost estimate for the ramp termini installation is as shown below and it will be included in Traffic Control System lump sum cost.


$$2 \text{ ramps} \times 1 \text{ PCMS/ramp} \times \$1200/\text{week} = \$2,400, \text{ Use } \$2,500.$$
6. The estimate in this TMP Datasheet is for Project Approval and Environmental Document (PA&ED) phase

PREPARED BY



 Dennis Do, PE
 Transportation Engineer
DATE 5/3/2023

APPROVAL RECOMMENDED BY



 Daisy Vergara, PE
 Senior Transportation Engineer
DATE 05/03/2023

APPROVED BY



 Kenneth C Young, PE
 District Traffic Manager
DATE 05/03/2023

ATTACHMENT G

Cost Estimate

PROJECT
PLANNING COST ESTIMATE©

EA: 07-37040

EA: 07-37040 PID: 720000128

PID: 720000128

District-County-Route: 07-LA-I-05

PM: R59.7R-R73.7

Type of Estimate : Project Report

Program Code : SHOPP

Project Limits : 0.2 Mile North of Lake Hughes Road Undercrossing to 0.7 Mile South of Vista Del Lago Road Overcrossing

Project Description: Minor Pavement Rehabilitation

Scope : Pavement resurfacing and restoration, upgrade existing metal beam guard rail (MBGR) to Midwest Guardrail System (MGS), install BMP

Alternative : Alternative # 2

SUMMARY OF PROJECT COST ESTIMATE

	Current Year Cost	Escalated Cost
TOTAL ROADWAY COST	\$ 44,741,603	\$ 49,175,709
TOTAL STRUCTURES COST	\$ -	\$ -
SUBTOTAL CONSTRUCTION COST	\$ 44,741,603	\$ 49,175,709
TOTAL RIGHT OF WAY COST	\$ 212,000	\$ 289,337
TOTAL CAPITAL OUTLAY COSTS	\$ 44,954,000	\$ 49,466,000
PA/ED SUPPORT	\$ 1,408,000	\$ 1,408,000
PS&E SUPPORT	\$ 3,001,026	\$ 3,159,000
RIGHT OF WAY SUPPORT	\$ 130,149	\$ 137,000
CONSTRUCTION SUPPORT	\$ 5,614,195	\$ 6,994,000
TOTAL SUPPORT COST	\$ 10,154,000	\$ 11,698,000
TOTAL PROJECT COST	\$ 55,108,000	\$ 61,164,000 *

Programmed Amount

Month / Year
Date of Estimate (Month/Year) 5 / 2023
Estimated Construction Start (Month/Year) 12 / 2024
Number of Working Days = 520
Estimated Mid-Point of Construction (Month/Year) 1 / 2026
Estimated Construction End (Month/Year) 3 / 2027
Number of Plant Establishment Days 0

Estimated Project Schedule

PID Approval 10/15/2020
PA/ED Approval 6/30/2023
PS&E 4/23/2024
RTL 6/10/2024
Begin Construction 12/30/2024

Reviewed by District O.E. or
Cost Estimate Certifier


Office Engineer / Cost Estimate Certifier

Ragy Samy 06/05/2023

213-269-1218

Approved by Project Manager

Allen Shim

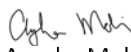
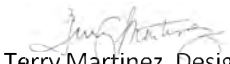


06/05/2023

(213) 266-6740

I. ROADWAY ITEMS SUMMARY

	Section	Cost
1	<u>Earthwork</u>	\$ 490,400
2	<u>Pavement Structural Section</u>	\$ 18,338,900
3	<u>Drainage</u>	\$ 244,903
4	<u>Specialty Items</u>	\$ 8,819,700
5	<u>Environmental</u>	\$ 396,400
6	<u>Traffic Items</u>	\$ 5,248,100
7	<u>Detours</u>	\$ -
8	<u>Minor Items</u>	\$ -
9	<u>Roadway Mobilization</u>	\$ 2,515,400
10	<u>Supplemental Work</u>	\$ 2,204,400
11	<u>State Furnished</u>	\$ 2,075,600
12	<u>Time-Related Overhead</u>	\$ 1,677,000
13	<u>Total Roadway Contingency</u>	\$ 2,730,800
TOTAL ROADWAY ITEMS		\$ 44,741,603

Estimate Prepared By :		05/30/2023	213-266-6230
	Ayesha Mohsin, Project Engineer	Date	Phone
Estimate Reviewed By :		05-31-23	213-266-6236
	Terry Martinez, Design Manager	Date	Phone

By signing this estimate you are attesting that you have discussed your project with all functional units and have incorporated all their comments or have discussed with them why they will not be incorporated.

SECTION 1: EARTHWORK

Item code		Unit	Quantity		Unit Price (\$)		Cost
190101	Roadway Excavation	CY	703	x	95.00	= \$	66,785
152320	Lead Compliance	LS	1	x	5,000.00	= \$	5,000
190105	Roadway Excavation (Type Z-2) ADL	CY	2,057	x	185.00	= \$	380,545
19801X	Imported Borrow	CY/TON		x		= \$	-
194001	Ditch Excavation	CY		x		= \$	-
192037	Structure Excavation (Retaining Wall)	CY	4	x	400.00	= \$	1,600
193013	Structure Backfill (Retaining Wall)	CY	3	x	1,400.00	= \$	4,200
193031	Pervious Backfill Material (Retaining Wall)	CY		x		= \$	-
170103	Clearing & Grubbing	LS	1	x	12,195.87	= \$	12,196
100100	Develop Water Supply	LS		x		= \$	-
19801X	Imported Borrow	CY/TON		x		= \$	-
200002	Roadside Clearing	LS	1	x	20,000.00	= \$	20,000
190105	Roadway Excavation (ADL TYPE Z)	LS		x		= \$	-

TOTAL EARTHWORK SECTION ITEMS	\$	490,400
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SECTION 2: PAVEMENT STRUCTURAL SECTION

Item code		Unit	Quantity		Unit Price (\$)		Cost
401055	Jointed Plain Concrete Pavement (RSC)	CY	244	x	700.00	= \$	170,800
400050	Continuously Reinforced Concrete Pavement	CY		x		= \$	-
390132	Hot Mix Asphalt (Type A)	TON	255	x	110.00	= \$	28,050
390137	Rubberized Hot Mix Asphalt (Type G)	TON	124,298	x	120.00	= \$	14,915,760
280000	Lean Concrete Base	CY		x		= \$	-
280015	Lean Concrete Base (RS)	CY	35	x	570.00	= \$	19,950
260303	Class 3 Aggregate Base	CY	372	x	200.00	= \$	74,400
414240	Isolation Joint Seal (Asphalt Rubber)	LF		x		= \$	-
414241	Isolation Joint Seal (Silicone)	LF	256	x	17.00	= \$	4,352
411105	Individual Slab Replacement (RSC)	CY	96	x	800.00	= \$	76,800
410096	Drill and Bond (Dowel Bar)	EA	32	x	75.00	= \$	2,400
391006	Geosynthetic Pavement Interlayer (Type K)	SQYD		x		= \$	-
290201	Asphalt Treated Permeable Base	CY		x		= \$	-
280200	Base Replacement	CY		x		= \$	-
374002	Asphaltic Emulsion (Fog Seal Coat)	TON		x		= \$	-
397005	Tack Coat	TON		x		= \$	-
360200	Base Bond Breaker	SQYD		x		= \$	-
374493	Polymer Asphaltic Emulsion (Seal Coat)	TON		x		= \$	-
731623	Minor Concrete (Curb Ramp)	CY		x		= \$	-
398100	Remove Asphalt Concrete Dike	LF	299,008	x	1.00	= \$	299,008
420201	Grind Existing Concrete Pavement	SQYD		x		= \$	-
398300	Remove Base and Surfacing	CY		x		= \$	-
394073	Place Hot Mix Asphalt Dike (Type A)	LF		x		= \$	-
390095	Replace Asphalt Concrete Surfacing	CY	402	x	700.00	= \$	281,400
41800X	Remove Concrete Pavement	SQYD/CY		x		= \$	-
394090	Place Hot Mix Asphalt (Miscellaneous Area)	SQYD		x		= \$	-
398200	Cold Plane Asphalt Concrete Pavement	SQYD	913,138	x	2.50	= \$	2,282,845
846046	6" Rumble Strip (Asphalt Concrete Pavement)	STA		x		= \$	-
846049	6" Rumble Strip (Concrete Pavement)	STA		x		= \$	-
846051	12" Rumble Strip (Asphalt Concrete Pavement)	STA	3,052	x	60.00	= \$	183,120
846052	12" Rumble Strip (Concrete Pavement)	STA		x		= \$	-
420102	Groove Existing Concrete Pavement	SQYD		x		= \$	-
394095	Roadside Paving (Miscellaneous Areas)	SQYD		x		= \$	-
390136	Minor Hot Mix Asphalt	TON		x		= \$	-
413111A	Repair Spalled Joints (Polyester Grout)	LS		x		= \$	-

TOTAL PAVEMENT STRUCTURAL SECTION ITEMS	\$	18,338,900
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SECTION 3: DRAINAGE

Item code		Unit	Quantity	Unit Price (\$)	Cost
710132	Remove Culvert	LF	x	= \$	-
710150	Modify Inlet	EA	x	= \$	-
194001	Ditch Excavation	CY	x	= \$	-
510094	Structure Concrete, Drainage Inlet	CY	x	= \$	-
710370	Sand Backfill	CY			
71010X	Abandon Culvert	EA/LF	x	= \$	-
710196	Adjust Inlet	LF	x	= \$	-
710262	Cap Inlet	EA	x	= \$	-
510501	Minor Concrete	CY	x	= \$	-
510502	Minor Concrete (Minor Structure)	CY	2 x	2,500.00	= \$ 5,000
731627	Minor Concrete (Curb, Sidewalk, and Curb Ramp)	CY	x	= \$	-
6101XX	XX" Alternative Pipe Culvert (Insert Type)	LF	x	= \$	-
650014	18"RCP	LF	x	= \$	-
710384	24" Cured In-Placed Pipeliner	LF	x	= \$	-
6811XX	XX" Plastic Pipe (Edge Drain)	LF	x	= \$	-
6901XX	XX" Corrugated Steel Pipe Downdrain (0.XXX" Thick)	LF	x	= \$	-
7006XX	XX" Corrugated Steel Pipe Inlet (0.XXX" Thick)	LF	x	= \$	-
7032XX	XX" Corrugated Steel Pipe Riser (0.XXX" Thick)	LF	x	= \$	-
705206	24" Concrete Flared End Section	EA	x	= \$	-
703233	Grated Line Drain	LF	x	= \$	-
723080	Rock Slope Protection (60lb, Class II, Method B)	CY	6 x	898.00	= \$ 5,388
729011	Rock Slope Protection Fabric (Class 8)	SQYD	6 x	4.00	= \$ 24
721420	Concrete (Ditch Lining)	CY	x	= \$	-
721430	Concrete (Channel Lining)	CY	x	= \$	-
750001	Miscellaneous Iron and Steel	LB	x	= \$	-
155121	24" Cured In-Placed Pipeliner	LF	x	= \$	-
721431	AC Apron	EA	1 x	2,455.49	= \$ 2,455
710118	Entrance Taper Removal	EA	5 x	677.09	= \$ 3,385
N/A	DPPIA Volume	CY	1,191 x	150.00	= \$ 178,650
N/A	Miscellaneous Drainage Facilities	LS	1 x	50,000.00	= \$ 50,000
710360	Cleaning, Inspecting and Preparing Culvert	LF	x	= \$	-

TOTAL DRAINAGE ITEMS	\$	244,903
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SECTION 4: SPECIALTY ITEMS

Item code		Unit	Quantity	Unit Price (\$)	Cost
520103	Bar Reinforced Steel (Retaining Wall)	LB	252 x	65.00	= \$ 16,380
5100XX	Structural Concrete	CY	x	= \$	-
510060	Structural Concrete, Retaining Wall	LS	x	= \$	-
5201XX	Bar Reinforcing Steel	LB	x	= \$	-
080050	Progress Schedule (Critical Path Method)	LS	x	= \$	-
582001	Sound Wall (Masonry Block)	SQFT	x	= \$	-
510530	Minor Concrete (Wall)	CY	x	= \$	-
60005X	Remove Sound Wall	LF/LS/SQFT	x	= \$	-
070030	Lead Compliance Plan	LS	x	= \$	-
141120	Treated Wood Waste	LB	855,666 x	0.40	= \$ 342,266
839752	Remove Guardrail	LF	77,525 x	6.00	= \$ 465,150
839750	Remove Barrier	LF	x	= \$	-
810190	Guard Railing Delineator	EA	7,845 x	15.00	= \$ 117,675
710167	Remove Flared End Section	EA	x	= \$	-
8000XX	Chain Link Fence (Insert Type)	LF	x	= \$	-
80XXXX	XX" Chain Link Gate (Type CL-X)	EA	x	= \$	-
832018	Midwest Guardrail System (8' Steel Post)	LF	96,588 x	60.00	= \$ 5,795,280
839301	Single Thrie Beam Barrier	LF	x	= \$	-
839310	Double Thrie Beam Barrier	LF	x	= \$	-
832070	Vegetation Control (Minor Concrete)	SQYD	19,676 x	70.00	= \$ 1,377,320
839521	Cable Railing	LF	x	= \$	-
839566	Terminal System (Type CAT)	EA	x	= \$	-
839584	Alternative In-line Terminal System	EA	62 x	3,600.00	= \$ 223,200
839585	Alternative Flared Terminal System	EA	x	= \$	-
4906XX	XX" Cast-In-Drilled-Hole Concrete Piling	LF	x	= \$	-
8396XX	Crash Cushion (Insert Type)	EA	x	= \$	-
8331XX	Concrete Barrier (Insert Type)	LF	x	= \$	-
475010	Retaining Wall (Masonry Wall)	SQFT	x	= \$	-
511035	Architectural Treatment	SQFT	x	= \$	-
780460	Anti-Graffiti Coating	SQFT	x	= \$	-
780450	Rock Stain	SQFT	x	= \$	-
4730XX	Reinforced Concrete Crib Wall (Insert Type)	SQFT	x	= \$	-
83954X	Transition Railing (Type WB)	EA	x	= \$	-
780440	Prepare and Stain Concrete	SQFT	x	= \$	-
839561	Rail Tensioning Assembly	EA	x	= \$	-
839581	End Anchor Assembly (Type SFT)	EA	62 x	1,300.00	= \$ 80,600
394074	Place HMA Dike (Type C)	LF	99,688 x	2.00	= \$ 199,376
394076	Place HMA Dike (Type E)	LF	202,420 x	1.00	= \$ 202,420
839576	End Cap	EA	x	= \$	-

TOTAL SPECIALTY ITEMS	\$	8,819,700
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Effective immediately, districts must input estimated item quantities in blue text above in the PRSM database for the pay items listed in the Design Memo, dated April 9, 2018, when Project Report is approved (Milestone 200). [Link to Design Memo.](#)

SECTION 5: ENVIRONMENTAL**5A - ENVIRONMENTAL MITIGATION**

Item code	Unit	Quantity	Unit Price (\$)	Cost
Biological Mitigation (on-site)	LS	1	x 10,000.00	= \$ 10,000
80010X Temporary Fence (Insert Type)	LF		x	= \$ -
130670 Temporary Reinforced Silt Fence	LF		x	= \$ -
Subtotal Environmental Mitigation				\$ 10,000

5B - LANDSCAPE AND IRRIGATION

Item code	Unit	Quantity	Unit Price (\$)	Cost
20XXXX Highway Planting	LS		x	= \$ -
20XXXX Irrigation System	LS		x	= \$ -
204099 Plant Establishment Work	LS		x	= \$ -
20XXXX Follow-up Landscape Project	LS		x	= \$ -
206405 Remove Irrigation Facility	LS		x	= \$ -
204096 Maintain Existing Planted Areas	LS	1	x 10,000.00	= \$ 10,000
206400 Check and Test Existing Irrigation Facilities	LS		x	= \$ -
21011X Imported Topsoil	CY/TON		x	= \$ -
200114 Rock Blanket	SQFT/SQYD		x	= \$ -
200122 Weed Germination	SQYD		x	= \$ -
995100 Water Meter Charges	LS		x	= \$ -
2087XX XX" Conduit (Use for Irrigation x-overs)	LF		x	= \$ -
20890X Extend X" Conduit (Use for Extension of Irrigation)	LF		x	= \$ -
Subtotal Landscape and Irrigation				\$ 10,000

5C - EROSION CONTROL

Item code	Unit	Quantity	Unit Price (\$)	Cost
211111 Permanent Erosion Control Establishment Work	LS		x	= \$ -
210010 Move-In/Move-Out (Erosion Control)	EA		x	= \$ -
210350 Fiber Rolls	LF		x	= \$ -
210360 Compost Sock	LF		x	= \$ -
2102XX Rolled Erosion Control Product (Insert Type)	SQFT		x	= \$ -
21025X Bonded Fiber Matrix	SQFT/ACRE		x	= \$ -
210300 Hydromulch	SQFT		x	= \$ -
210420 Straw	SQFT		x	= \$ -
210430 Hydroseed	SQFT	100,000	x 0.10	= \$ 10,000
210610 Compost	CY		x	= \$ -
210630 Incorporate Materials	SQFT			
Subtotal Erosion Control				\$ 10,000

5D - NPDES

Item code	Unit	Quantity	Unit Price (\$)	Cost
130300 Prepare SWPPP	LS	1	x 13,000.00	= \$ 13,000
130200 Prepare WPCP	LS		x	= \$ -
130100 Job Site Management	LS	1	x 80,000.00	= \$ 80,000
130330 Storm Water Annual Report	EA	1	x 2,000.00	= \$ 2,000
130310 Rain Event Action Plan	EA		x	= \$ -
130320 Storm Water Sampling and Analysis Day	EA	1	x 1,500.00	= \$ 1,500
130520 Temporary Hydraulic Mulch	SQYD		x	= \$ -
130550 Temporary Hydroseed	SQYD		x	= \$ -
130505 Move-In/Move-Out (Temporary Erosion Control)	EA		x	= \$ -
130640 Temporary Fiber Roll	LF	38,400	x 3.50	= \$ 134,400
130680 Temporary Silt Fence	LF	4,150	x	= \$ -
130900 Temporary Concrete Washout	LS	1	x 50,000.00	= \$ 50,000
130710 Temporary Construction Entrance	EA	3	x 6,000.00	= \$ 18,000
130610 Temporary Check Dam	LF		x	= \$ -
130620 Temporary Drainage Inlet Protection	EA	20	x 375.00	= \$ 7,500
130730 Street Sweeping	LS	1	x 60,000.00	= \$ 60,000
Subtotal NPDES				\$ 366,400

TOTAL ENVIRONMENTAL	\$	396,400
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Supplemental Work for NPDES

066595 Water Pollution Control Maintenance Sharing*	LS	1	x 22,000.00	= \$ 22,000
066596 Additional Water Pollution Control**	LS	1	x 6,000.00	= \$ 6,000
066597 Storm Water Sampling and Analysis***	LS	1	x 5,000.00	= \$ 5,000
XXXXXX Some Item	LS		x	= \$ -
Subtotal Supplemental Work for NPDES				\$ 33,000

*Applies to all SWPPPs and those WPCPs with sediment control or soil stabilization BMPs.

**Applies to both SWPPPs and WPCP projects.

*** Applies only to project with SWPPPs.

SECTION 6: TRAFFIC ITEMS**6A - Traffic Electrical**

Item code		Unit	Quantity		Unit Price (\$)		Cost
871300X	Modifying Camera Systems	EA		x	= \$		-
860532X	Modifying Changeable Message Sign Systems	EA		x	= \$		-
872XXX	Electrical Items	LS		x	= \$		-
XXXXXX	Modifying Vehicle Detection Systems	EA		x	= \$		-
XXXXXX	Modifying Census Station	EA		x	= \$		-
872131	Modifying Lighting Systems	LS	1	x	20,000.00	= \$	20,000
872133	Modifying Existing Electrical Systems	LS		x	= \$		-
872134	Modifying Ramp Metering Systems	LS	1	x	15,000.00	= \$	15,000
15075X	Remove Sign Structure	EA/LS		x	= \$		-
151581	Reconstruct Sign Structure	EA		x	= \$		-
XXXXXX	Modifying EMS	EA		x	= \$		-
XXXXXX	Temporary Detection	LS		x	= \$		-
XXXXXX	System Testing and Documentation	LS		x	= \$		-
872140	Removing Existing Electrical System	LS		x	= \$		-
87011X	Inductive Loop Detector	LS		x	= \$		-
86XXXX	Fiber Optic Conduit System	LS		x	= \$		-
120100	Traffic Control System	LS		x	= \$		-
872140A	Temporary MVDS	LS	1	x	60,000.00	= \$	60,000
872130A	Modifying Roadside Weather Info Systems	LS	1	x	50,000.00	= \$	50,000
872135	Modifying Traffic Monitoring Stations	LS	1	x	155,000.00	= \$	155,000
870009	Maintaining Existing Traffic Management System Elem	LS	1	x	2,000.00	= \$	2,000
870600	Traffic Monitoring Station System (Census Station)	EA	1	x	92,000.00	= \$	92,000

Subtotal Traffic Electrical \$ 394,000

6B - Traffic Signing and Striping

Item code		Unit	Quantity		Unit Price (\$)		Cost
141103	Remove Yellow Thermoplastic Traffic Stripe (Hazardous Waste)	LF	220,000	x	1.50	= \$	330,000
141120	Treated Wood Waste	LB	10,000	x	1.50	= \$	15,000
840656	Paint Traffic Stripe (2-Coat)	LF	20,000	x	1.50	= \$	30,000
846007	6" Thermoplastic Traffic Stripe (Enhanced Wet Night Visibility)	LF	366,000	x	0.90	= \$	329,400
840517	Preformed Thermoplastic Pavement Marking	SQFT	7,000	x	21.20	= \$	148,400
847210	6" Traffic Stripe Tape (Warranty)	LF	126,000	x	12.00	= \$	1,512,000
847216	8" Traffic Stripe Tape (Warranty)	LF	8,000	x	14.30	= \$	114,400
846030	Remove Thermoplastic Traffic Stripe	LF	500,000	x	0.50	= \$	250,000
846035	Remove Thermoplastic Pavement Marking	SQFT		x	= \$		-
840516	Thermoplastic Pavement Marking (Enhanced Wet Night Visibility)	SQFT		x	= \$		-
820270	Remove Roadside Sign (Wood Post)	EA		x	= \$		-
568046	Remove Sign Structure	EA		x	= \$		-
560226	Furnish Sign Structure (Versatile Truss)	LB		x	= \$		-
560227	Install Sign Structure (Versatile Truss)	LB		x	= \$		-
498052	60" Cast-In-Drilled-Hole Concrete Pile (Sign Foundation)	LF		x	= \$		-
731502	Minor Concrete (Miscellaneous Construction)	CY	1	x	4,000.00	= \$	4,000
568046	Remove OH Sign Lighting & Structure Walkway	SQFT		x	= \$		-
xxxxxx	Work to Shield New OH Sign Posts (Need Capture By	LS		x	= \$		-
810120	Remove Pavement Marker	EA	12,400	x	1.25	= \$	15,500
810230	Pavement Marker (Retroreflective)	EA	12,400	x	3.70	= \$	45,880
820151	Object Marker (Type L-1)	EA	500	x	155.00	= \$	77,500
820220	Remove Marker	EA	500	x	50.00	= \$	25,000
820360	Remove Sign Panel	EA		x	= \$		-
566011	Roadside Sign - One Post	EA		x	= \$		-
566012	Roadside Sign - Two Post	EA		x	= \$		-
820750	Furnish Single Sheet Aluminum Sign (0.063" - Unframe	SQFT		x	= \$		-
820700	Furnish Formed Panel Sign (Overhead)	SQFT		x	= \$		-
820720	Furnish Laminated Panel Sign (1" - Type B)	SQFT		x	= \$		-
820760	Furnish Single Sheet Aluminum Sign (0.080" - Unframe	SQFT		x	= \$		-
820780	Furnish Single Sheet Aluminum Sign (0.063" - Framed)	SQFT		x	= \$		-
820790	Furnish Single Sheet Aluminum Sign (0.080" - Framed)	SQFT		x	= \$		-
820810	Metal (Roadside Sign)	LB		x	= \$		-
820920	Install Roadside Sign (Laminated Wood Box Post)	EA		x	= \$		-
820890	Install Sign Panel On Existing Frame	EA		x	= \$		-

Subtotal Traffic Signing and Striping \$ 2,897,080

6C - Traffic Management Plan

Item code		Unit	Quantity		Unit Price (\$)		Cost
128651	Portable Changeable Message Sign	LS		x	= \$		-

Subtotal Traffic Management Plan \$ -

6C - Stage Construction and Traffic Handling

Item code		Unit	Quantity		Unit Price (\$)		Cost
120090	Construction Area Signs	LS	1	x	25,000.00	= \$	25,000
120103	Stationary Impact Attenuator Vehicle	EA	1	x	= \$		-
120198	Plastic Traffic Drums	EA		x	= \$		-
120116	Type II Barricade	EA		x	= \$		-
120120	Type III Barricade	EA		x	= \$		-
129100	Temporary Crash Cushion Module	LS		x	= \$		-
120100	Traffic Control System	LS	1	x	1,755,500.00	= \$	1,755,500
120204	Portable Radar Speed Feedback Sign System Day	LS	1	x	114,400.00	= \$	114,400
129110	Temporary Crash Cushion	EA	42	x	300.00	= \$	12,600
129000	Temporary Railing (Type K)	LF	900	x	55.00	= \$	49,500
120149	Temporary Pavement Marking (Paint)	SQFT		x	= \$		-
120152	Temporary Pavement Marking (Tape)	SQFT		x	= \$		-
8101XX	Delineator (Insert Class)	EA		x	= \$		-

Subtotal Stage Construction and Traffic Handling \$ 1,957,000

TOTAL TRAFFIC ITEMS \$ 5,248,100

SECTION 7: DETOURS

Includes constructing, maintaining, and removal

Item code		Unit	Quantity	Unit Price (\$)		Cost
190101	Roadway Excavation	CY	x	=	\$	-
19801X	Imported Borrow	CY/TON	x	=	\$	-
390132	Hot Mix Asphalt (Type A)	TON	x	=	\$	-
26020X	Class 2 Aggregate Base	CY/TON	x	=	\$	-
250401	Class 4 Aggregate Subbase	CY	x	=	\$	-
130620	Temporary Drainage Inlet Protection	EA	x	=	\$	-
129000	Temporary Railing (Type K)	LF	x	=	\$	-
128601	Temporary Signal System	LS	x	=	\$	-
120149	Temporary Pavement Marking (Paint)	SQFT	x	=	\$	-
80010X	Temporary Fence (Insert Type)	LF	x	=	\$	-
XXXXXX	Some Item	LS	x	=	\$	-

TOTAL DETOURS	\$	-
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SUBTOTAL SECTIONS 1 through 7	\$	33,538,403
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SECTION 8: MINOR ITEMS**8A - Americans with Disabilities Act Items**

ADA Items	0.0%	\$	-
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8B - Bike Path Items

Bike Path Items	0.0%	\$	-
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8C - Other Minor Items

Other Minor Items	0.0%	\$	-
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Total of Section 1-7	\$	33,538,403	x	0.0%	=	\$	-
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TOTAL MINOR ITEMS	\$	-
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SECTIONS 9: ROADWAY MOBILIZATION

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Item code							
999990	Total Section 1-8	\$	33,538,403	x	8%	=	\$ 2,515,381

TOTAL ROADWAY MOBILIZATION	\$	2,515,400
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SECTION 10: SUPPLEMENTAL WORK

Item code		Unit	Quantity	Unit Price (\$)		Cost
066670	Payment Adjustments For Price Index Fluctuations	LS	1	x 756,200.00	=	\$ 756,200
066094	Value Analysis	LS	1	x 10,000.00	=	\$ 10,000
066070	Maintain Traffic	LS	1	x 146,775.00	=	\$ 146,775
066919	Dispute Resolution Board	LS	1	x 22,500.00	=	\$ 22,500
090205	Dispute Resolution Board On-Site Meeting	EA	10	x 6,000.00	=	\$ 58,000
090210	Hourly Off-Side Dispute Resolution Board Related Tasks	HR	97	x 200.00	=	\$ 19,333
066921	Dispute Resolution Advisor	LS	1	x 5,000.00	=	\$ 5,000
066015	Federal Trainee Program	LS	1	x 800.00	=	\$ 800
066610	Partnering	LS	1	x 70,000.00	=	\$ 70,000
066204	Remove Rock and Debris	LS		x	=	\$ -
066222	Locate Existing Crossover	LS		x	=	\$ -
066016	Just-In-Time Training (JITT)	LS	1	x 2,500.00	=	\$ 2,500
66860	Maintain Existing Electrical System	LS	1	x 10,000.00	=	\$ 10,000
66393	HMA Smoothness Incentive	Unit	1	x 63,000.00	=	\$ 63,000
66405	Concrete Pavement Smoothness Incentive	Unit	1	x 1,078.13	=	\$ 1,078

Cost of NPDES Supplemental Work specified in Section 5D	=	\$	33,000
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Total Section 1-8	\$	33,538,403	3%	=	\$	1,006,153
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TOTAL SUPPLEMENTAL WORK	\$	2,204,400
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*Note: For Project less than 50 Working Days Mobilization is not required as a separate contract item, however contract item prices should take into consideration mobilization as part of the price.

If the building portion of the project is greater than 50% of the total project cost, then mobilization is not included.

SECTION 11: STATE FURNISHED MATERIALS AND EXPENSES

Item code		Unit	Quantity		Unit Price (\$)	=	Cost
066105	Resident Engineers Office	LS	1	x	278,000.00	=	\$278,000
066063	Traffic Management Plan - Public Information	LS	1	x	722,500.00	=	\$722,500
066330	Type 334LS Cabinet	EA	1	x	6,000.00	=	\$6,000
066876	Loop Detector Sensor Unit	EA	6	x	50.00	=	\$300
066336	Model 204 Flasher Unit	EA	1	x	20.00	=	\$20
066335	Model 200 Switchpack	EA	1	x	20.00	=	\$20
066311	Model 2070-6A Modem	EA	1	x	560.00	=	\$560
066322	Model 2070-7G Universal Time Base Module	EA	1	x	640.00	=	\$640
066329	Harness for Model 2P Model	EA	1	x	90.00	=	\$90
066911	Utility Connection Fee (Electric)	EA	1	x	10,000.00	=	\$10,000
066901	Water Expenses	LS		x		=	\$0
8609XX	Traffic Monitoring Station (X)	LS		x		=	\$0
066841	Traffic Controller Assembly	LS		x		=	\$0
066840	Traffic Signal Controller Assembly	LS		x		=	\$0
066062	COZEEP Contract	LS	1	x	720,000.00	=	\$720,000
066838	Reflective Numbers and Edge Sealer	LS		x		=	\$0
066065	Tow Truck Service Patrol	LS		x		=	\$0
066916	Annual Construction General Permit Fee	LS	1	x	2,000.00	=	\$2,000
Total Section 1-8		\$	33,538,403	1%	=	\$	335,385

TOTAL STATE FURNISHED	\$2,075,600
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SECTION 12: TIME-RELATED OVERHEAD

Total of Roadway and Structures Contract Items excluding Mobilization \$33,538,403 (used to calculate total TRO)

Estimated Time-Related Overhead (TRO) Percentage (0% to 10%) = **5.0%**

Item code	Unit	Quantity		Unit Price (\$)	=	Cost
090100	Time-Related Overhead	WD	520	X	\$3,225	\$1,677,000

TOTAL TIME-RELATED OVERHEAD	\$1,677,000
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SECTION 13: ROADWAY CONTINGENCY*

Risk Amount from Risk Register	(for Known Risks)	10%	
Additional or Residual Contingency	(for Unknown/Undefined Risks)	0%	\$0
Total Section 1-12	\$	42,010,803	x 7% = \$2,730,703

TOTAL CONTINGENCY*	\$2,730,800
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*Recommended Total Contingency: (Pre-PSR (feasibility) 30%-50%, PSR (initiation) 25%, Draft PR (draft approval) 20%, PR (approval) 15%, after PR approval 10%, Final PS&E 5%)

*Total contingency includes quantified risk based contingency from the risk register. Any Increase in recommended total contingency levels need to be approved by management.

II. STRUCTURE ITEMS

	Bridge 1		OHSS on Bridge		Retaining Wall
DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Bridge Name	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Bridge Number	53-XXX		57-XXX		57-XXX
Structure Type	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Width (Feet) [out to out]	0 LF		0 LF		15 LF
Total Bridge Length (Feet)	0 LF		0 LF		1000 LF
Girder Repair	1 LS		0 SQFT		15000 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Cost Per Square Foot			\$0		\$0
COST OF EACH STRUCTURE					

	Building 1				
DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Building Name	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Bridge Number	57-XXX		57-XXX		57-XXX
Structure Type	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Building Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Cost Per Square Foot	\$300		\$0		\$0
COST OF EACH	\$0		\$0		\$0

	TOTAL COST OF BRIDGES	\$0
	TOTAL COST OF BUILDINGS	\$0
Time-Related Overhead	10%	\$0
STRUCTURES MOBILIZATION	10%	\$0
STRUCTURES CONTINGENCY*	25%	\$0
TOTAL COST OF STRUCTURES		\$0

Estimate Prepared By: _____
 XXXXXXXXXXXXXXXXXXXX — Division of Structures

_____ Date

EA: 07-37040 PID: 720000128

III. RIGHT OF WAY

Fill in all of the available information from the Right of Way Data Sheet.

			<i>Current Value Future Use</i>		<i>Escalated Value</i>
A)	A1)	Acquisition, including Excess Land, Fees, Damages, Goodwill	\$	\$	0
	A2)	Acquisition of Offsite Mitigation	\$	\$	0
	A3)	Railroad Acquisition	\$	\$	0
B)	B1)	Utility Relocation (State Share)	\$	212,000	\$ 289,337
	B2)	Potholing (Design Phase)	\$	\$	0
C)		Utility - Advance Engineering Estimate (Encumber with State Only Funds)	\$	\$	0
D)		RAP and/or Last Resort Housing	\$	\$	0
E)		Clearance & Demolition	\$	\$	0
F)		Relocation Assistance (RAP and/or Last Resort Housing Costs)	\$	\$	0
G)		Title and Escrow	\$	\$	0
H)		Environmental Review	\$	\$	0
I)		Condemnation Settlements <u>0%</u>	\$	\$	0
J)		Design Appreciation Factor <u>0%</u>	\$	\$	0
K)		Utility Relocation (Construction Cost)	\$	\$	0

L)	TOTAL RIGHT OF WAY ESTIMATE	\$212,000
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M)	TOTAL R/W ESTIMATE: Escalated	\$289,337
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N)	RIGHT OF WAY SUPPORT	\$137,000
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Support Cost Estimate Prepared By	Glen Forsyth Project Coordinator ¹	213-269-0509 Phone
Utility Estimate Prepared By	Victor H Lee II Utility Coordinator ²	213-264-9168 Phone
R/W Acquisition Estimate Prepared By	Right of Way Estimator ³	Phone

Note: Items G & H applied to items A + B

¹ When estimate has Support Costs only² When estimate has Utility Relocation³ When R/W Acquisition is required

ATTACHMENT I

Risk Register

RISK REGISTER CERTIFICATION (ACCOUNTABILITY CHECKPOINTS) FORM

PPM-D07-0001 (REV 05/2022)

The risk register is to be approved and signed-off by the District Deputies listed below for all scalability levels. By signing this form, you are certifying that you have reviewed the risks documented in the register and agree that they have been managed to the extent possible by the PDT.

Project Information	<input checked="" type="checkbox"/> Capital Project <input type="checkbox"/> Major Maintenance Project (Check One)	Total Capital Cost: \$44,954,000
Project ID/District-EA	Project ID: 0720000128 / EA-07-370400	
Project Description	Minor Pavement Rehabilitation (CAPM)- LA-005-PM R59.7R/R73.7 & LA-005-R59.7L/R65.4L	
Project Manager	Allen Shim	
Project Risk Manager	Gabriel Tse	
<input type="checkbox"/> No Risk Register Certification Required -- Check box if project is less than \$1 million in total cost and risk register not prepared. Sign below and submit this form with PID, PA&ED, PS&E submittal, and RE Handoff File (as applicable).		

Project Manager Signature _____ Date: _____

PID (Required for Capital Projects)

Project Manager	_____	Date: _____
Deputy District Director, Planning	_____	Date: _____
Deputy District Director, Design	_____	Date: _____
Deputy District Director, Right of Way	_____	Date: _____
Deputy District Director, Environmental	_____	Date: _____
Deputy District Director, Traffic Operations	_____	Date: _____
Deputy District Director, Maintenance	_____	Date: _____
Deputy District Director, Project Management	_____	Date: _____

PA&ED (Required for Capital Projects)

Project Manager	<i>Allen Shim</i>	Date: 06/12/2023
Deputy District Director, Design	<i>Gregory Fann</i>	Date: 06/12/2023
Deputy District Director, Construction	<i>Assam Abumukhor</i>	Date: 06/14/2023
Deputy District Director, Right of Way	<i>Zaki El</i>	Date: 06/16/2023
Deputy District Director, Environmental	<i>Don Wagner</i>	Date: 06/12/2023
Deputy District Director, Traffic Operations	<i>Don Wagner</i>	Date: 06/13/2023
Deputy District Director, Maintenance	<i>Hamid Saadatnagadi</i>	Date: 06/13/2023
Deputy District Director, Project Management	<i>Pete C...</i>	Date: 06/12/2023

Prior to PS&E (Required for Capital Projects)

Project Manager	_____	Date: _____
Deputy District Director, Design	_____	Date: _____
Deputy District Director, Construction	_____	Date: _____
Deputy District Director, Right of Way	_____	Date: _____
Deputy District Director, Environmental	_____	Date: _____
Deputy District Director, Traffic Operations	_____	Date: _____
Deputy District Director, Maintenance	_____	Date: _____
Deputy District Director, Project Management	_____	Date: _____

Route & Post Mile: Primary: 07-LA-005-PM R59.7R/R73.7 Secondary: 07-LA-005-R59.7L/R65.4L Project Name: Minor Pavement Rehabilitation (CAPM) between 0.2 miles north of Lake Hughes to 0.7 miles south of Vista De Lago Road							Milestones					Duration				Base RW Cap Est (k): \$212		Adjusted Base for Price Uncertainty on RW Cap Est (k) @ 70th Percentile: \$222		PM: Allen Shim			
							PID	PA&ED	PS&E	RTL	CCA	Con Working Days: 520				Base Con Cap Est (k): \$42,011		Adjusted Base for Price Uncertainty on Con Cap Est (k) @ 70th Percentile: \$43,475		DM: Teresa Martinez			
							(M010)	(M200)	(M380)	(M460)	(M600)	Plant Est Days: 0				Base Contingency (k): \$2,731		Risk Impact on Con Cap (k) @ 70th Percentile: \$3667 (9%)		RM: Gabriel Tse			
							10/15/2020A	06/30/23	04/26/24	05/08/24	03/03/27	Total Con Days: 520				Base Total Capital Est (k): \$44,954		Risk-Based Total Capital Est (k) @ 70th Percentile: \$47,363					
Scope Summary: The project proposes the following scope of work: -Cold plane 0.20' Asphalt Concrete (AC) section and overlay 0.20' of Rubberized Hot Mix Asphalt – Type G (RHMA-G) on freeway mainline and shoulder -Cold plane various depths of AC section and overlay with Hot Mix Asphalt –Type A (HMA-A) on ramps -Replace structural section at various localized areas -Reconstruct approximately 203,000 feet of AC dikes on mainline and ramps -Install 12” rumble strips on mainline inside and outside shoulders throughout the project limits -Install ramp termini at NB and SB Templin Highway off-ramps -Upgrade existing MBGR to MGS -Install End Terminal Systems -Install Transition Railings -Upgrade and modify existing drainage facilities due to the impacts caused by the installation of MGS -Install one (1) Census Station – Transportation Management System at PM R65.967 -Install three (3) Design Pollution Prevention Infiltration Areas (DPPIAs) -Install two (2) Maintenance Vehicle Pullout (MVP) at DPPIA locations and one (1) retaining wall (Type 1 Case 1, approximately 4 feet in height) at the MVP location																							
Risk Identification							Risk Impact Assessment								Response Strategy								
							Contingency (@70th Percentile):				9%												
							Risk Impact on Con Capital (@70th Percentile):				\$3,667,204		Risk Impact on Working Days* (@70th Percentile):									88	
Risk No.	Status	Type	Category	Risk Title	Risk Statement	Risk Details with Current Status/Assumptions	Probability of Occurrence	Low (\$)	Most Likely (\$)	High (\$)	Cost Impact	Low	Most Likely	High	Time Impact	Rationale	Strategy	Response Actions	Risk Owner	Updated			
1	Active	Threat	DGN	Scope Refinement/Additional Work	As a result of scope changes to the project during its development, a requirement for additional work may occur, which would lead to increased project cost and schedule delays.	It is possible that additional pavement rehabilitation may be required within the project limits by the time this project is in construction. Corrugated Metal Pipes may need new liners or an entire replacement. Currently, there are several emergency projects (i.e. slope stabilization) within the project limits due to weather, climate change, and natural disaster. There is a risk that additional emergency projects (that may occur before the project goes into construction) may alter the design process and needs. The surrounding work area already has pavement failures that may need to be addressed.	30%	\$2,000,000	\$3,000,000	\$5,000,000	\$950,000	15	20	25	6	By finalizing the scope of work, the project cost estimates will be more reliable.	Mitigate	Work with all functions and stakeholders to firm up the project scope.	Project Engineer & Project Manager	June 2, 2023			
2	Active	Threat	DGN	Potential of Design Change	As a result of changes made to the project design during its development, additional work may be required, which would lead to increased project costs and duration of construction.	The hinge point for the MGS is unknown at this point and may change the post size/length; vegetation control has not yet been finalized. In addition, the design and location of the BMPs and MVPs have not been finalized. Non-standard retaining wall design for MVP and design changes to the BMP's may cause geotechnical issues.	35%	\$1,000,000	\$2,000,000	\$3,000,000	\$700,000	10	20	30	7	Given the unknown scope of work, and the emergency projects within the project limits, there is a possibility of design modifications.	Mitigate	A final design determination will be made in the PS&E Phase.	Project Engineer	June 8, 2023			
3	Active	Threat	CON	Differing Site Conditions	As a result of differences between design data and actual field conditions, design modifications may occur, which would lead to increased project costs and duration of construction.	Variations in site conditions may be possible. The last Pavement Condition Detailed Report was in 2018. In addition, the project is located within an area where weather, climate change, and natural disaster can affect the site conditions. For example, due to the recent rainy season, there are currently 3 emergency projects on Route 5 for slope stabilization.	15%	\$1,000,000	\$3,000,000	\$5,000,000	\$450,000	10	15	20	2	Adequately characterizing the project site will reduce the cost uncertainty.	Mitigate	Minimize contractor surprises by thoroughly characterizing the site.	Resident Engineer/Project Engineer	June 2, 2023			
4	Active	Threat	CON	Prices and Economic Conditions	As a result of changes in the demand and supply of materials during the Bidding Phase, equipment costs, labor rates, and material price increases may occur, which would lead to increased project costs.	In the past year, there have been noticeable increases in the cost of building construction materials and fuel; e.g., the cost of electrical components and wiring. Also, the availability of products/materials has decreased and there have been shipping delays (up to 6 months). For example, it has been difficult to obtain concrete additives like Fly Ash. Uncertainty in prices and economic climate is expected to vary during the development of the project. Given the COVID-19 pandemic, the US and California economies may be negatively impacted resulting in fewer competitive bids and difficulty obtaining some materials, such as steel and concrete. In addition, labor costs and shortages have been increasing. The construction industry is in a period of exceptionally fast- rising costs for various construction materials, compounded by the rising price of diesel fuel and major supply- chain disruptions.\$756,200 has been allocated for price index fluctuations.	40%	\$500,000	\$750,000	\$1,000,000	\$300,000	5	10	15	4	Ultimately the marketplace determines the prices.	Mitigate	Follow the Caltrans process to list and advertise this project for the maximum competition. The Project Engineer will work with the Construction Estimate Specialist in the PS&E Phase to determine the appropriate pricing and cost for the proposed work using recent bids information.	Project Manager & Project Engineer	June 2, 2023			
5	Active	Threat	CON	Unsheltered/ Homeless Encampments	If unsheltered or homeless encampments are encountered within the project limits during construction, additional effort and time may be required for their removal or possible relocation, which would lead to increased project costs and schedule delays.	Caltrans personnel has witnessed some unsheltered or homeless encampments near the project areas that span over fourteen miles on LA-5. However, there is a small possibility that encampments may increase by the time the project goes to construction. Also, due to COVID-19 and the current economic conditions, there could be an increasing rate of homeless encampments.	30%	\$300,000	\$400,000	\$500,000	\$120,000	15	20	25	6	In March 2020, new protocols/guidelines were issued regarding the proper handling of unsheltered/homeless encampments. MPD 10-01 has outlined that encampments must be given significant notice prior to removals well as outline how to proceed with the removal and cleaning. However, MPD 20-2 has suspended cleanups unless there is a significant safety concern or a local partner has identified safer spaces for unsheltered people to move indoors.	Mitigate	Before beginning construction activities, RE will work with Maintenance/Right-of-Way to relocate encampments. Include language in the project specifications for the Contractor to keep the area clear of any new homeless encampments.	Project Manager & Resident Engineer	May 18, 2023			
6	Active	Threat	TRF	Traffic Operations	Because traffic operations needs to be maintained/managed throughout the construction zone, modifications to the traffic handling plans (with limited construction window) may occur, which would lead to increased project costs and schedule delays.	Because this freeway segment is the main Route to connect North-South California with limited alternative route nearby, traffic through the construction site must be maintained at all-time. Most of the work is currently planned to be in the remote area. TMP Data Sheet, dated 5/3/2023, estimates \$720,000 for COZEEP.	30%	\$200,000	\$300,000	\$400,000	\$90,000	10	15	20	5	Construction plans will help to determine a more reliable cost estimate. Traffic through the construction site must be maintained.	Mitigate	A Transportation Handling Plan will be prepared for the viable/ preferred alternative during the PS&E Phase.	Traffic Engineer & Project Engineer	June 8, 2023			
7	Active	Threat	CON	Weather Delays - Non-Working Days	As a result of abnormal weather conditions, disruption of construction may occur, which would lead to schedule delays.	The construction site is known to have frequent fires and landslides. The TRO for 520 working days has been allocated for \$3,225 per day in the estimate.	40%	\$50,000	\$75,000	\$100,000	\$30,000	20	40	60	16	The project is located within an area that is prone to weather related issues (i.e. wildfire or even heavy rainfall).	Mitigate	Some weather and non-working days are expected. RE will work with Contractor to minimize the non-working days.	Project Manager & Resident Engineer	May 23, 2023			
8	Active	Threat	ROW	Utility Identification & Relocation Needs	As a result of a detailed site investigation, the need to relocate utilities outside the project area may arise, which would lead to project cost increases and schedule delays.	Impact on utilities is not yet fully assessed. There are existing utilities consisting of Mobile, Southern California Gas Lines, Arco, Century Link, SCV, Torrance Logistics, Verizon Business, and PT&T. \$212,000 has been allocated for utility relocations costs and potholing. More support hours for Right of Way may be necessary in the following phases.	10%	\$100,000	\$250,000	\$400,000	\$25,000	30	60	90	6	Identifying all impacted utilities is critical to establishing the cost of utility relocations.	Mitigate	Identify all utilities impacted, contact companies and monitor progress.	Utility Engineer	June 14, 2023			
9	Active	Threat	CON	Construction Coordination	As a result of the construction of this project within the limits of another project under construction, difficulties in coordinating traffic and work activities between the two projects may occur, which would lead to increased project costs and duration.	Due to the weather conditions, potential emergency projects may happen or occur during construction which may impact this project's schedule. The following projects are located within the construction limits and may conflict with the project schedule: EA 2332E (RTL 4/8/20A) - Construct HOV and Truck Lanes EA 32340 (RTL 5/21/21A) - Drainage Repair & Slope Repair EA 35230 (RTL 8/26/23) - Repair/Replace Joints and Drains	30%	\$50,000	\$75,000	\$100,000	\$22,500	10	15	20	5	Need coordination to identify conflicting projects to adjust the construction schedule and accept this risk.	Mitigate	Include a coordination clause in the project specifications (PS&E). Coordinate with permitting agencies to identify local projects within the same project limits and adjust the construction schedule to avoid conflicts.	Project Manager & Project Engineer	June 2, 2023			

EA-07-370400, EFIS ID: 0720000128 Route & Post Mile: Primary: 07-LA-005-PM R59.7R/R73.7 Secondary: 07-LA-005-R59.7L/R65.4L Project Name: Minor Pavement Rehabilitation (CAPM) between 0.2 miles north of Lake Hughes to 0.7 miles south of Vista De Lago Road							Milestones					Duration				Base RW Cap Est (k): \$212		Adjusted Base for Price Uncertainty on RW Cap Est (k) @ 70th Percentile: \$222		PM: Allen Shim		
							PID	PA&ED	PS&E	RTL	CCA	Con Working Days: 520				Base Con Cap Est (k): \$42,011		Adjusted Base for Price Uncertainty on Con Cap Est (k) @ 70th Percentile: \$43,475		DM: Teresa Martinez		
							(M010)	(M200)	(M380)	(M460)	(M600)	Plant Est Days: 0				Base Contingency (k): \$2,731		Risk Impact on Con Cap (k) @ 70th Percentile: \$3667 (9%)		RM: Gabriel Tse		
							10/15/2020A	06/30/23	04/26/24	05/08/24	03/03/27	Total Con Days: 520				Base Total Capital Est (k): \$44,954		Risk-Based Total Capital Est (k) @ 70th Percentile: \$47,363				
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Risk Identification							Risk Impact Assessment								Response Strategy							
							Contingency (@70th Percentile):			9%												
							Risk Impact on Con Capital (@70th Percentile):			\$3,667,204		Risk Impact on Working Days* (@70th Percentile):									88	
Risk No.	Status	Type	Category	Risk Title	Risk Statement	Risk Details with Current Status/Assumptions	Probability of Occurrence	Low (\$)	Most Likely (\$)	High (\$)	Cost Impact	Low	Most Likely	High	Time Impact	Rationale	Strategy	Response Actions	Risk Owner	Updated		
10	Active	Threat	ENV	Environmental Impact & Clearance	As a result of details uncovered by environmental studies, a requirement for extensive mitigation measures may occur, which would lead to increased project costs and schedule delays.	Per Environmental Document approved on 4/20/23, the environmental impact document of the project is to be categorized as Categorically Exempt (CEQA)/Categorical Exclusion (NEPA). If the project scope changes, further environmental review and analysis would be required in the subsequent phases to determine if the project's environmental document should be elevated.	15%	\$25,000	\$50,000	\$100,000	\$8,125	176	220	264	33	Identify all studies to be conducted.	Mitigate	Coordinate with DEP to conduct all necessary studies for environmental compliance as early as possible if this risk were to occur.	Environmental Planner	May 18, 2023		
11	Active	Threat	ENV	Hazardous Waste	As a result of unanticipated Hazardous waste discovered during the Construction Phase, additional hazardous mitigation planning may occur, which would lead to design schedule delays and project cost increases. Aerially deposited lead, yellow and white traffic striping, treated wood waste, and asbestos shim have been identified within the project's limits.	Additional hazardous waste may be encountered as aerially deposited lead, yellow and white traffic striping, and treated wood waste have been identified within the project's limits. If the DPPIAs (Design Pollution Prevention Infiltration Area) locations are changed or hazardous wastes are found below the surface tests, project costs and schedule delays may increase. \$452,540 has been allocated for ADL, \$427,833 has been allocated for treated wood waste, and \$330,000 has been allocated for yellow traffic striping removal.	10%	\$10,000	\$20,000	\$30,000	\$2,000	5	10	15	1	Effective handling of hazardous waste on site reduces the cost of disposal.	Mitigate	Develop plans to handle as much hazardous waste on site and minimize disposal costs.	Hazardous Waste Engineer	May 18, 2023		

ATTACHMENT J

Storm Water Data Report

Primary: 07-LA-5, PM 59.7R/73.7R
Secondary: 07-LA-5, PM 59.7L/65.43L
EA 370400

Long Form - Stormwater Data Report
June 2023



Dist-County-Route: 07-LA-005
Post Mile Limits: Primary: 07-LA-5, PM 59.7R/73.7R
Secondary: 07-LA-5, PM 59.7L/65.43L
Type of Work: Minor Pavement Rehabilitation
Project ID (EA): 0720000128 (370400)
Program Identification: 20.XX.201.121
Phase: ☐ PID ☒ PA/ED ☐ PS&E

Regional Water Quality Control Board(s): Los Angeles-Region 4
Total Disturbed Soil Area: 5.60 Acres PCTA: 0.06 Acres
Alternative Compliance (acres): 1.726 Acres ATA 2 (50% Rule)? Yes ☐ No ☒
Estimated Const. Start Date: 12-30-24 Estimated Const. Completion Date: 03-03-27
Risk Level: RL 1 ☐ RL 2 ☒ RL 3 ☐ WPCP ☐ Other: _____
Is MWELo applicable? Yes ☐ No ☒
Is the Project within a TMDL watershed? Yes ☒ No ☐
TMDL Compliance Units (acres): 1.880 acres
Notification of ADL reuse (if yes, provide date): Yes ☐ Date: _____ No ☒

This Report has been prepared under the direction of the following Licensed Person. The Licensed Person attests to the technical information contained herein and the date upon which recommendations, conclusions, and decisions are based. Professional Engineer or Landscape Architect stamp required at PS&E only.

Teresa Martinez 06-14-2023
Teresa Martinez, Registered Project Engineer Date

I have reviewed the stormwater quality design issues and find this report to be complete, current and accurate:

Allen Shim 6/14/2023
Allen Shim, Project Manager Date

David Lawrence 06/14/2023
David Lawrence, Maintenance Representative Date

Kathleen S Hamer Kathleen Hamer Acting for 06/14/2023
Bongkod Lohmongkol, Landscape Architect Date
Representative

[Stamp Required at PS&E only] Andy Liao 6/14/2023
Andy Liao, District/Regional Design SW Coordinator Date

STORMWATER DATA INFORMATION

1. Project Description

This is a Minor Pavement Rehabilitation-MPR Project (formerly known as Capital Preventative Maintenance) along Route 5 in Los Angeles County, from 0.2-mile North of Lake Hughes Road Undercrossing (PM R59.7) to 0.7-mile South of Vista Del Lago Road Overcrossing (PM R73.7). The major core of work involves pavement resurfacing and restoration by cold planing and overlaying the mainline and ramps. The project also includes improvements which comprises of upgrading metal beam guard rail (MBGR) to Midwest Guardrail System (MGS), end terminal system, and , AC dikes, along with 3 treatment Best Management Practices (BMPs)

All work will be completed within Caltrans right-of-way.

Minimal disturbance of existing slopes are proposed only when necessary for the construction of the vegetation control pavement.

Two maintenance vehicle pullouts (MVPs) are proposed for the ease of maintaining the BMPs. It appears a retaining wall will be required when constructing the MVP. Additional information on the type and or height of walls will be determined in the next phase.

Wood posts from MBGR and construction signs that require removal are considered treated wood waste (TWW) and managed (handling, storing, transporting, and disposing) under Title 22 Code of Regulations since the existing wood posts are assumed to be treated with chemical chemical preservatives. In addition, asbestos shims may be present in the existing MBGR.

Aerially deposited lead (ADL) exists in unpaved area due to particulate emissions from historical leaded gasoline usage. MBGR upgrades, vegetation control and construction of MVPs are all scope of work on unpaved soils.

The project's total Disturbed Soil Area (DSA) and new impervious surface (NIS) are calculated as follows:

Work Items	Disturbed Soil Area (DSA)
Vegetation Control	96,588 ft x 2 ft = 193,176 sqft = 4.43 acres
BMPs	1.10 acres
MVPs	0.06 acres
Retaining wall at MVP	0.01 acres
TOTAL DSA	5.60 acres

The project's total DSA is 5.60 acres which is greater than 1.00 acre.

The total Disturbed Soil Area (DSA) for the project is estimated at (5.60 acres). The area was estimated using project survey data and by adding the footprint of all construction areas. The project is 14.0 miles long.

The new impervious surface (NIS) was calculated as the addition of the net new impervious (NNI) and the replaced impervious surface (RIS). The NNI is the total post-project impervious area minus the pre-project impervious, which includes any new impervious area that was previously previous. The MVPs are considered to be part of the NNI, and thus the calculated NNI is equal to 0.06 acres. The RIS was calculated as replaced impervious areas which are locations where the entire structural section was replaced, and it is equal to 0.0 acres. Therefore, the NIS was calculated at 0.06 acres.

The Post Construction Treatment Area (PCTA) requirements are calculated by summing the NIS and the additional treated area (ATA) which consists of Conditions 1 and 2 identified in Section 4.4.1 of the PPDG. The ATA for condition 1 equals to zero because there are no existing treatment Best Management Practices (BMPs) that are removed or modified as part of the project. The ATA for condition 2 is also zero because the NNI for the project is zero which is not greater than 50 percent of the total post-project impervious area within the project limits. Therefore, the PCTA equals the NIS, which is 0.06 acres.

A total of three (3) treatment BMPs are proposed as part of this project to address TMDLs. Due to the lack of irrigation within the vicinity of these BMPs, they are all Design Pollution Prevention Infiltration Areas (DPPIA). The table below identifies the location and total disturbed area for each BMP.

Treatment BMPs					
No.	Location No.	Type	Post Mile	Direction	Total DSA (Acres)
1	23	DPPIA	60.20	NB	0.50
2	26	DPPIA	60.50	NB	0.23
3	28	DPPIA	60.76	NB	0.37

2. Site Data and Stormwater Quality Design Issues

Water Quality Data

According to the Caltrans Water Quality Planning Tool, the project is located within the Los Angeles County Phase I MS4 area and the Upper Piru is a high-risk receiving watershed.

A Categorical Exemption/Categorical Exclusion Determination Form was signed on April 20, 2023. The proposed project is not expected to pose any adverse effects on any natural or biological communities of concern.

Currently, the land use along I-5 is vacant. The project extends along the I-5 corridor within the Santa Clara–Calleguas Watershed, which is under the jurisdiction of the Los Angeles Regional Water Quality Control Board- Region 4 (RWQCB). The Hydrologic Sub-Areas (HSA) within the project limits are:

PM	Hydrologic Area	HSA	HSA Area (acres)
R59.7 – R65.5	Upper Santa Clara	Eastern (403.51)	291,838
R65.5 – R73.7	Piru	Upper Piru (403.42)	169,192

The Receiving Water Bodies on the 303(d) 2020 – 2022 303(d) List and pollutants of concern are as follows:

- Castaic Lake – Mercury, PCBs (Polychlorinated biphenyls)
- Pyramid Lake – Chlordane, DDT (Dichlorodiphenyltrichloroethane), Dieldrin, Mercury, PCBs
- Santa Clara River Reach 11 (above Santa Felicia Dam) – Chloride, pH, Toxicity

Part of the project limits are within the Santa Clara River Total Maximum Daily Load (TMDL) Watershed Boundary (PM 59.7/65.5). The TMDLs are as follows:

Santa Clara River

Pollutant(s)	Effective Date	LA RWQB Resolution No.	Categorical Implementation Requirements ^{1 2}
Title: TMDL for Indicator Bacteria in the Santa Clara River Estuary and Reaches 3, 5, 6 and 7			
Indicator bacteria	03/21/2012	R10-006	Dry-weather non-storm water and wet-weather storm water discharges may significantly increase bacteria loading to receiving waters. Caltrans shall implement control measures and/or BMPs to prevent the discharge of bacteria from its R/W. Source control measures include street sweeping, illegal dumping clean-up, public education on littering. BMPs include devices which treat storm water through retention/detention, infiltration and/or diversion.
Title: TMDL for Chloride in the Upper Santa Clara River and Santa Clara River Reach 3			
Chloride	Revised 04/28/2015	R14-010	Caltrans does not discharge significant amounts of chloride and any minor discharges to the Santa Clara River are typically related to dewatering and construction projects that are covered by the Statewide Permit. No additional TMDL implementation actions for control of chloride are required.

1 Refer to §4 of the PPDG to determine the specific impervious threshold for stormwater Treatment BMP requirements.

2 General TMDL Requirements can be found in Attachment IV of the NPDES Statewide Storm Water Permit.

Geotechnical Data

Geotechnical data is currently pending.

Topographic Data

The subject site is located within the Transverse Ranges Geomorphic Province and lies within the Angeles National Forest. East-west trending mountain ranges and valleys characterize the Transverse Range. The project site consists of a series of sedimentary geologic formations within the hills along I-5. These formations are marine sedimentary deposits consisting of the Castaic Formation and the Ridge Basin Group.

Hydraulic Data

According to the Natural Resources Conservation Service (NRCS), the soil types within the southern end of the project were identified as Hydrologic Soil Groups (HSG) A, B, and C. The general soil type at the northern end of project was identified as HSG D. Group D consists of soils having a very slow infiltration rate (high runoff potential) when thoroughly wet.

Climatic Data

The climate in Santa Clarita is classified as semiarid or Mediterranean in the Koppen climate classification. Santa Clarita is generally hot and dry through most of the year, ranging from 70 to 100 degrees Fahrenheit during the summer and 40 to 65 degrees Fahrenheit during the winter. The average annual precipitation is approximately 18 inches, with most of the rainfall occurring between December and March.

3. Construction Site BMPs to be used on Project

This project requires a Storm Water Pollution Prevention Plan (SWPPP) as the total DSA generated by the project is greater than 1 acre.

DSA will be protected in accordance with the project's approved SWPPP.

Three (3) rainy seasons are anticipated between the begin and end of construction.

The following contract bid items will be required for the implementation of temporary construction site BMP strategy:

- Prepare Stormwater Pollution Prevention Plan (SWPPP)
- Job Site Management
- Stormwater Annual Report
- Stormwater Sampling and Analysis Day
- Temporary fiber rolls
- Temporary Drainage inlet protection
- Temporary Construction entrances
- Street sweeping
- Temporary Concrete Washout

The following BMPs will be implemented under Job Site Management:

- Water Conservation Practices
- Vehicle and Equipment Cleaning
- Vehicle and Equipment Fueling
- Vehicle and Equipment Maintenance
- Potable Water/Irrigation
- Hazardous Waste Management
- Material Use
- Contaminated Soil Management
- Solid Waste Management
- Concrete Waste Management
- Stockpile Waste Management
- Spill Prevention Management
- Wind Erosion Control
- Sanitary/Septic Waste Management

The following supplemental BMPs will be required:

- Additional Water Pollution Control
- Water Pollution Control Maintenance Sharing
- Stormwater Sampling and Analysis

Fees for the Annual Construction General Permit will be Department Finished Materials.

Temporary construction site BMPs have been estimated at \$401,400.

On April 25, 2023, Arthur Herayati, District 7 Construction Storm Water Coordinator agreed to the temporary construction site BMPs strategy used at the PA&ED Phase for the scope of work of this project.

Risk Assessment

This is a Risk Level 2 project and required to perform stormwater sampling at all discharge locations. Stormwater sampling and analysis requirements are specified in the Contract Special Provisions.

The project was determined to be Risk Level 2 based on Method 1, GIS Map Method, Appendix 1, 2009 CGP. The Risk Level documentation is attached to this report.

4. Maintenance BMPs

A total of 3 treatment BMPs (identified in Section 1 above), are proposed within the limits of the project and two MVPs will be provided, one at Location 26 and another at Location 28 for maintenance of the BMPs. The third BMP will not require an MVP as there is an extra wide area adjacent to the shoulder which can be used to maintain the BMP.

5. Other Water Quality Requirements and Agreements

This project has a Categorical Exemption/Categorical Exclusion Determination, there are no additional requirements from other permits and 401 Certification is not required for this project.

6. Permanent BMPs

Design Pollution Prevention (DPP) BMP Strategy

Vegetation control (minor concrete) is proposed at the MGS locations and thus a total of 4.43 acres is claimed as DPP credit.

The total cost for the DPP credit areas is \$2,164,360.00.

The project will modify the existing slopes at the locations where the maintenance vehicle pullouts will be constructed for the maintenance of the BMPs and for the construction of the BMPs. Slopes will be designed at 4:1 slopes or flatter.

Preservation of existing vegetation, soils and stream buffer areas have been maximized.

Concentrated flow conveyance systems such dikes are proposed for this project. Dikes route the runoff to existing and proposed drainage inlets. These drainage features are shown on the Drainage Plans.

Treatment BMP Strategy

Treatment BMP Strategy was based on the recommendations from the final Corridor Storm Water Management Study, for I-5 from PM 43.9 to 46.4 and PM 59.0 to 87.4 dated February 2012.

A total of three Design Pollution Prevention Infiltration Areas were identified as feasible within the project limits after field evaluation and feasibility studies done by Hydraulics, Design, Maintenance, Landscape, and Storm Water units. Borehole percolation tests are currently being performed at the DPPIA locations and infiltration test results are pending. See table below for a summary of the Treatment BMPs.

BMP Identifier Number	BMP Type	Treated Impervious Area (CT RW) (ac)	Treated Impervious Area (Outside CT RW) (ac)	Treated Pervious Area (CT RW) (CUs) (ac)	Treated Pervious Area (Outside CT RW) (CUs) (ac)
23	DPPIA	0.839	0	0.047	0
26	DPPIA	0.260	0	0.068	0
28	DPPIA	0.687	0	0.039	0
Total Treated Area (acre):		1.786	0	0.154	0

The total cost for the treatment BMPs is estimated at \$190,000.

Complete the following table if treatment is required for the project.

Table E-1. Overall Project Treatment Summary Table ¹		
	PCTA (ac) ²	0.06
Total Area to be Treated	Treated Impervious Area (CT RW) (ac)	1.786
	Treated Impervious Area (Outside CT RW) (ac) ³	0
	Treated Pervious Area (CT RW) (CUs) (ac)	0.154
	Treated Pervious Area (Outside CT RW) (CUs) (ac) ³	0
	PCTA Balance (ac) ⁴	$F = (B+C) - A = (1.786+0) - 0.06 = 1.726$
TMDL Areas Only	Stabilized Area (ac)	0
	Alternative Compliance (ac) ⁶	1.726
	TMDL Compliance Units (ac) ⁵	$H=D+E+F+G = 0.154+0+1.726+0=1.880$

- 1 This table is provided as an example. The table may be edited, altered, or removed as applicable or as directed by the District/Regional Design Stormwater Coordinator.
- 2 Provide treatment for ATA 1 even if NIS is less than 1 acre.
- 3 Requires Regional Board approval. Coordinate with District/Regional NPDES Coordinator.
- 4 If less than 0, additional treatment must be identified.
- 5 Areas identified as Post Construction Treatment Balance (F) can only be applied as CUs when it has not been used as Alternative Compliance. This area cannot be double counted. In addition, Stabilized Areas (G) within a TMDL can only be applied when the area is not included in the Total Treated Area (D and E).
- 6 Available Alternative Compliance
 - Negative Value - amount of treatment needed through Alternative Compliance.
 - Positive Value - amount of treatment available for Alternative Compliance (within the same watershed) or CUs as determined by the district.

Required Attachments

- R Factor Calculation
- Vicinity Map
- Evaluation Documentation Form (EDF)
- Risk Level Determination Documentation

Supplemental Attachments

- SWDR Summary Spreadsheets
- Deviation of BMP from the Corridor Study Recommendation
- Conceptual Stormwater Quality Plans

National Pollutant Discharge Elimination System (NPDES)

CONTACT US
SHARE    

Rainfall Erosivity Factor Calculator for Small Construction Sites

EPA's stormwater regulations allow NPDES permitting authorities to waive NPDES permitting requirements for stormwater discharges from small construction sites if:

- the construction site disturbs less than five acres, and
- the rainfall erosivity factor ("R" in the revised universal soil loss equation, or RUSLE) value is less than five during the period of construction activity.

If your small construction project is located in an area where EPA is the permitting authority and your R factor is less than five, you qualify for a low erosivity waiver (LEW) from NPDES stormwater permitting. If your small construction project does not qualify for a waiver, then NPDES stormwater permit coverage is required. Follow the steps below to calculate your R-Factor.

LEW certifications are submitted through the NPDES eReporting Tool or "CGP-NeT". Several states that are authorized to implement the NPDES permitting program also accept LEWs. Check with your state NPDES permitting authority for more information.

- [Submit your LEW through EPA's eReporting Tool](#)
- [List of states, Indian country, and territories where EPA is the permitting authority \(pdf\)](#)
- [Construction Rainfall Erosivity Waiver Fact Sheet](#)
- [Small Construction Waivers and Instructions \(pdf\)](#)

The R-factor calculation can also be integrated directly into custom applications using the [R-Factor web service](#).


For questions or comments, email EPA's CGP staff at cgp@epa.gov.

 Select the estimated start and end dates of construction by clicking the boxes and using the dropdown calendar.

The period of construction activity begins at initial earth disturbance and ends with final stabilization.

Start Date: 12/30/2024

End Date: 12/30/2025

 Locate your small construction project using the search box below or by clicking on the map.

Location: -118.69868182507, 34.5751641940769

Search

+

—

● Click the "Calculate R Factor" button below to calculate an R Factor for your small construction project.

Calculate R Factor

Facility Information

Start Date: 12/30/2024	Latitude: 34.5752
End Date: 12/30/2025	Longitude: -118.6987

Calculation Results

Rainfall erosivity factor (R Factor) = **48.75**

A rainfall erosivity factor of 5.0 or greater has been calculated for your site's period of construction.

You do NOT qualify for a waiver from NPDES permitting requirements and must seek Construction General Permit (CGP) coverage. If you are located in an [area where EPA is the permitting authority \(pdf\)](#), you must submit a Notice of Intent (NOI) through the [NPDES eReporting Tool \(NeT\)](#). Otherwise, you must seek coverage under your state's CGP.

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For questions or comments, email EPA's CGP staff at cgp@epa.gov.

 Select the estimated start and end dates of construction by clicking the boxes and using the dropdown calendar.

The period of construction activity begins at initial earth disturbance and ends with final stabilization.

Start Date:

End Date:

 Locate your small construction project using the search box below or by clicking on the map.

Location:

Search

+

-

● Click the "Calculate R Factor" button below to calculate an R Factor for your small construction project.

Calculate R Factor

Facility Information

Start Date: 12/31/2025	Latitude: 34.5752
End Date: 12/30/2026	Longitude: -118.6987

Calculation Results

Rainfall erosivity factor (R Factor) = **48.75**

A rainfall erosivity factor of 5.0 or greater has been calculated for your site's period of construction.

You do NOT qualify for a waiver from NPDES permitting requirements and must seek Construction General Permit (CGP) coverage. If you are located in an [area where EPA is the permitting authority \(pdf\)](#), you must submit a Notice of Intent (NOI) through the [NPDES eReporting Tool \(NeT\)](#). Otherwise, you must seek coverage under your state's CGP.

Rainfall Erosivity Factor Calculator for Small Construction Sites

EPA's stormwater regulations allow NPDES permitting authorities to waive NPDES permitting requirements for stormwater discharges from small construction sites if:

- the construction site disturbs less than five acres, and
- the rainfall erosivity factor ("R" in the revised universal soil loss equation, or RUSLE) value is less than five during the period of construction activity.

If your small construction project is located in an area where EPA is the permitting authority and your R factor is less than five, you qualify for a low erosivity waiver (LEW) from NPDES stormwater permitting. If your small construction project does not qualify for a waiver, then NPDES stormwater permit coverage is required. Follow the steps below to calculate your R-Factor.

LEW certifications are submitted through the NPDES eReporting Tool or "CGP-Net". Several states that are authorized to implement the NPDES permitting program also accept LEWs. Check with your state NPDES permitting authority for more information.

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- [List of states, Indian country, and territories where EPA is the permitting authority \(pdf\)](#)
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For questions or comments, email EPA's CGP staff at cgp@epa.gov.

 Select the estimated start and end dates of construction by clicking the boxes and using the dropdown calendar.

The period of construction activity begins at initial earth disturbance and ends with final stabilization.

Start Date: 12/31/2026

End Date: 03/03/2027

 Locate your small construction project using the search box below or by clicking on the map.

Location: -118.69868182507, 34.5751641940769

Search

+

-

● Click the "Calculate R Factor" button below to calculate an R Factor for your small construction project.

Calculate R Factor

Facility Information

Start Date: 12/31/2026	Latitude: 34.5752
End Date: 03/03/2027	Longitude: -118.6987

Calculation Results

Rainfall erosivity factor (R Factor) = **22.57**

A rainfall erosivity factor of 5.0 or greater has been calculated for your site's period of construction.

You do NOT qualify for a waiver from NPDES permitting requirements and must seek Construction General Permit (CGP) coverage. If you are located in an [area where EPA is the permitting authority \(pdf\)](#), you must submit a Notice of Intent (NOI) through the [NPDES eReporting Tool \(NeT\)](#). Otherwise, you must seek coverage under your state's CGP.

SHEET
No.

INDEX OF PLANS

DESCRIPTION

TITLE

LOCATIONS OF CONSTRUCTION

TYPICAL CROSS SECTIONS

KEY MAP AND LINE INDEX

PROJECT CONTROL

LAYOUTS

PROFILE

CONSTRUCTION DETAILS

CONTOUR GRADING

DRAINAGE PLANS, DETAILS, AND QUANTITIES

UTILITY PLANS

CONSTRUCTION AREA SIGNS

MOTORIST INFORMATION PLANS AND QUANTITIES

STAGE CONSTRUCTION AND TRAFFIC HANDLING PLANS AND QUANTITIES

TRAFFIC HANDLING PLANS, DETAILS, AND QUANTITIES

PAVEMENT DELINEATION PLANS AND QUANTITIES

SIGN PLANS, DETAILS, SPECIAL DESIGN SIGNS, AND QUANTITIES

SUMMARY OF QUANTITIES

EROSION CONTROL LEGEND, PLANS, AND QUANTITIES

ELECTRICAL PLANS, DETAILS, AND QUANTITIES

REVISED STANDARD PLANS

THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT
IS INCLUDED IN THE NOTICE TO BIDDERS
AND SPECIAL PROVISIONS BOOK.

Begin Work

Sta "LA-5 FWY CL" 3101+91

BEGIN CONSTRUCTION

Sta "LA-5 FWY CL"

3128+31 PM R59.7

LAKE HUGHES Rd UC

Br No. 53-1908L/R

END "LA-5 FWY CL" 3135+73.56

Beg "CL-SBCL1" 3135+73.56

Beg "CL-NBCL1" 3135+73.56

TEMPLIN Hwy UC

S5/N5 SEPARATION
Br No. 53-1902L

END "CL-SBCL1" 3442+28.18

END "CL-NBCL1" 3438+78.60

Beg "CL-NBCL1_AFTERGAP-1" 3438+60.60

GOLDEN STATE Hwy

PARADISE RANCH Rd

TEMPLIN Hwy

END CONSTRUCTION

Sta "CL-SBCH1" 3876+50 PM R73.7

NO SCALE

End Work

Sta "CL-SBCH1" 3902+90

THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES)
OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

BORDER LAST REVISED 8/1/2016

CALTRANS WEB SITE IS: [HTTP://WWW.DOT.CA.GOV/](http://WWW.DOT.CA.GOV/)

RELATIVE BORDER SCALE
IS IN INCHES

0 1 2 3

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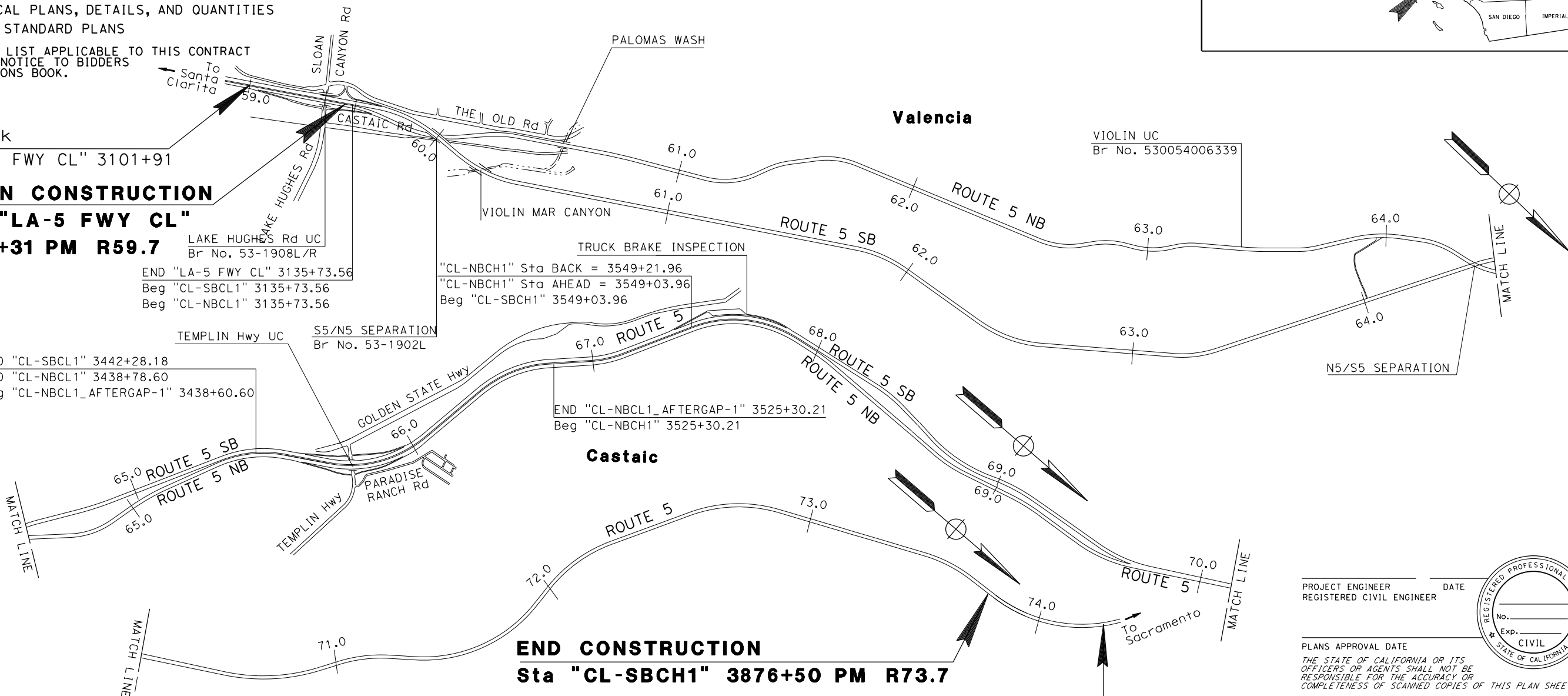
UNIT 1808

PROJECT NUMBER & PHASE 07200001281

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN LOS ANGELES COUNTY
FROM 0.2 MILES NORTH OF LAKE HUGHES ROAD
UNDERCROSSING TO 0.7 MILES SOUTH OF VISTA DEL LAGO
ROAD OVERCROSSING

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2018

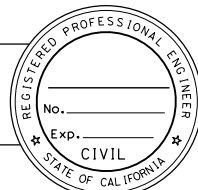


PROJECT ENGINEER
REGISTERED CIVIL ENGINEER

DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS
OFFICERS OR AGENTS SHALL NOT BE
RESPONSIBLE FOR THE ACCURACY OR
COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



CONTRACT No.

07-370401

PROJECT ID

0720000128

DATE PLOTTED => 5/4/2023
TIME PLOTTED => 7:22:50 AM
00-00-00

DATE: 04/05/2023

Project ID (EA): 0720000128
 (EA 370400)

No.	Criteria	Yes ✓	No ✓	Supplemental Information for Evaluation
1.	Begin Project evaluation regarding requirement for implementation of Treatment BMPs	✓		See Figure 4-1, Project Evaluation Process for Consideration of Treatment BMPs. Continue to 2.
2.	Is the scope of the Project to install Treatment BMPs (e.g., Alternative Compliance or TMDL Compliance Units)?		✓	If Yes , go to 8. If No , continue to 3.
3.	Is there a direct or indirect discharge to surface waters?	✓		If Yes , continue to 4. If No , go to 9.
4.	As defined in the WQAR or ED, does the project: a. discharge to areas of Special Biological Significance (ASBS), or b. discharge to a TMDL watershed where Caltrans is named stakeholder, or c. have other pollution control requirements for surface waters within the project limits?		✓	If Yes to any , contact the District/Regional Design Stormwater Coordinator or District/Regional NPDES Coordinator to discuss the Department's obligations, go to 8 or 5. <u>AL</u> (Dist./Reg. Coordinator initials) If No to all, continue to 5.
5.	Are any existing Treatment BMPs partially or completely removed? (ATA condition #1, Section 4.4.1)			If Yes , go to 8 AND continue to 6. If No , continue to 6.
6.	Is this a Routine Maintenance Project?			If Yes , go to 9. If No , continue to 7.
7.	Does the project result in an increase of <u>one acre or more</u> of new impervious surface (NIS)?			If Yes , go to 8. If No , go to 9.
8.	Project is required to implement Treatment BMPs.	Complete Checklist T-1, Part 1.		
9.	Project is not required to implement Treatment BMPs. _____ (Dist./Reg. Design SW Coord. Initials) _____ (Project Engineer Initials) _____ (Date)	Document for Project Files by completing this form and attaching it to the SWDR.		

	A	B	C	D	E	F	G
1	Version 8/17/2011						
2		Risk Determination Worksheet					
3							
4			Step 1	Determine Sediment Risk via one of the options listed:			
5				1. GIS Map Method - EPA Rainfall Erosivity Calculator & GIS map			
6				2. Individual Method - EPA Rainfall Erosivity Calculator & Individual Data			
7			Step 2	Determine Receiving Water Risk via one of the options listed:			
8				1. GIS map of Sediment Sensitive Watersheds provided			
9				2. Site Specific Analysis (support documentation required)			
10			Step 3	Determine Combined Risk Level			

	A	B	C
1	Sediment Risk Factor Worksheet		Entry
2	A) R Factor		
3	Analyses of data indicated that when factors other than rainfall are held constant, soil loss is directly proportional to a rainfall factor composed of total storm kinetic energy (E) times the maximum 30-min intensity (I30) (Wischmeier and Smith, 1958). The numerical value of R is the average annual sum of EI30 for storm events during a rainfall record of at least 22 years. "Isoerodent" maps were developed based on R values calculated for more than 1000 locations in the Western U.S. Refer to the link below to determine the R factor for the project site.		
4	http://cfpub.epa.gov/npdes/stormwater/LEW/lewCalculator.cfm		
5	R Factor Value		120.07
6	B) K Factor (weighted average, by area, for all site soils)		
7	The soil-erodibility factor K represents: (1) susceptibility of soil or surface material to erosion, (2) transportability of the sediment, and (3) the amount and rate of runoff given a particular rainfall input, as measured under a standard condition. Fine-textured soils that are high in clay have low K values (about 0.05 to 0.15) because the particles are resistant to detachment. Coarse-textured soils, such as sandy soils, also have low K values (about 0.05 to 0.2) because of high infiltration resulting in low runoff even though these particles are easily detached. Medium-textured soils, such as a silt loam, have moderate K values (about 0.25 to 0.45) because they are moderately susceptible to particle detachment and they produce runoff at moderate rates. Soils having a high silt content are especially susceptible to erosion and have high K values, which can exceed 0.45 and can be as large as 0.65. Silt-size particles are easily detached and tend to crust, producing high rates and large volumes of runoff. Use Site-specific data must be submitted.		
8	Site-specific K factor guidance		
9	K Factor Value		0.24
10	C) LS Factor (weighted average, by area, for all slopes)		
11	The effect of topography on erosion is accounted for by the LS factor, which combines the effects of a hillslope-length factor, L, and a hillslope-gradient factor, S. Generally speaking, as hillslope length and/or hillslope gradient increase, soil loss increases. As hillslope length increases, total soil loss and soil loss per unit area increase due to the progressive accumulation of runoff in the downslope direction. As the hillslope gradient increases, the velocity and erosivity of runoff increases. Use the LS table located in separate tab of this spreadsheet to determine LS factors. Estimate the weighted LS for the site prior to construction.		
12	LS Table		
13	LS Factor Value		10.29
14			
15	Watershed Erosion Estimate (=R_xK_xLS) in tons/acre		296.524872
16	Site Sediment Risk Factor		High
17	Low Sediment Risk: < 15 tons/acre		
18	Medium Sediment Risk: >=15 and <75 tons/acre		
19	High Sediment Risk: >= 75 tons/acre		
20			

Receiving Water (RW) Risk Factor Worksheet		Entry	Score
A. Watershed Characteristics		yes/no	
A.1. Does the disturbed area discharge (either directly or indirectly) to a 303(d)-listed waterbody impaired by sediment (For help with impaired waterbodies please visit the link below) or has a USEPA approved TMDL implementation plan for sediment ? http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml OR		no	Low
A.2. Does the disturbed area discharge to a waterbody with designated beneficial uses of SPAWN & COLD & MIGRATORY? (For help please review the appropriate Regional Board Basin Plan) http://www.waterboards.ca.gov/waterboards_map.shtml			
Region 1 Basin Plan Region 2 Basin Plan Region 3 Basin Plan Region 4 Basin Plan Region 5 Basin Plan Region 6 Basin Plan Region 7 Basin Plan Region 8 Basin Plan Region 9 Basin Plan			

Combined Risk Level Matrix			
<u>Receiving Water Risk</u>	<u>Sediment Risk</u>		
	Low	Medium	High
	Low	Level 1	Level 2
High	Level 2		Level 3

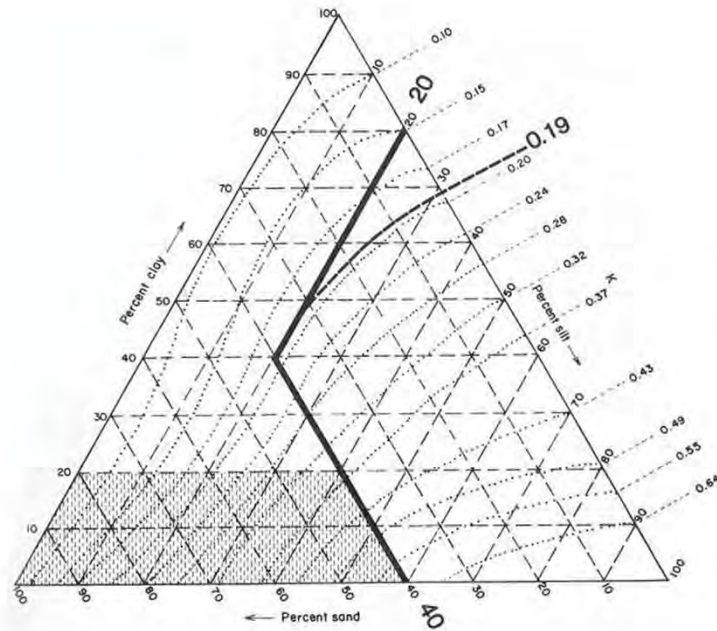
Project Sediment Risk: **High**

Project RW Risk: **Low**

Project Combined Risk: **Level 2**

Soil Erodibility Factor (K)

The K factor can be determined by using the nomograph method, which requires that a particle size analysis (ASTM D-422) be done to determine the percentages of sand, very fine sand, silt and clay. Use the figure below to determine appropriate K value.



Erickson triangular nomograph used to estimate soil erodibility (K) factor.

The figure above is the USDA nomograph used to determine the K factor for a soil, based on its texture (% silt plus very fine sand, % sand, % organic matter, soil structure, and permeability). *Nomograph from Erickson 1977 as referenced in Goldman et. al., 1986.*

Sheet Flow Length (ft)		Average Watershed Slope (%)																		
		0.2	0.5	1.0	2.0	3.0	4.0	5.0	6.0	8.0	10.0	12.0	14.0	16.0	20.0	25.0	30.0	40.0	50.0	60.0
<3		0.05	0.07	0.09	0.13	0.17	0.20	0.23	0.26	0.32	0.35	0.36	0.38	0.39	0.41	0.45	0.48	0.53	0.58	0.63
6		0.05	0.07	0.09	0.13	0.17	0.20	0.23	0.26	0.32	0.37	0.41	0.45	0.49	0.56	0.64	0.72	0.85	0.97	1.07
9		0.05	0.07	0.09	0.13	0.17	0.20	0.23	0.26	0.32	0.38	0.45	0.51	0.56	0.67	0.80	0.91	1.13	1.31	1.47
12		0.05	0.07	0.09	0.13	0.17	0.20	0.23	0.26	0.32	0.39	0.47	0.55	0.62	0.76	0.93	1.08	1.37	1.62	1.84
15		0.05	0.07	0.09	0.13	0.17	0.20	0.23	0.26	0.32	0.40	0.49	0.58	0.67	0.84	1.04	1.24	1.59	1.91	2.19
25		0.05	0.07	0.10	0.16	0.21	0.26	0.31	0.36	0.45	0.57	0.71	0.85	0.98	1.24	1.56	1.86	2.41	2.91	3.36
50		0.05	0.08	0.13	0.21	0.30	0.38	0.46	0.54	0.70	0.91	1.15	1.40	1.64	2.10	2.67	3.22	4.24	5.16	5.97
75		0.05	0.08	0.14	0.25	0.36	0.47	0.58	0.69	0.91	1.20	1.54	1.87	2.21	2.86	3.67	4.44	5.89	7.20	8.37
100		0.05	0.09	0.15	0.28	0.41	0.55	0.68	0.82	1.10	1.46	1.88	2.31	2.73	3.57	4.59	5.58	7.44	9.13	10.63
150		0.05	0.09	0.17	0.33	0.50	0.68	0.86	1.05	1.43	1.92	2.51	3.09	3.68	4.85	6.30	7.70	10.35	12.75	14.89
200		0.06	0.10	0.18	0.37	0.57	0.79	1.02	1.25	1.72	2.34	3.07	3.81	4.56	6.04	7.88	9.67	13.07	16.16	18.92
250		0.06	0.10	0.19	0.40	0.64	0.89	1.16	1.43	1.99	2.72	3.60	4.48	5.37	7.16	9.38	11.55	15.67	19.42	22.78
300		0.06	0.10	0.20	0.43	0.69	0.98	1.28	1.60	2.24	3.09	4.09	5.11	6.15	8.23	10.81	13.35	18.17	22.57	26.51
400		0.06	0.11	0.22	0.48	0.80	1.14	1.51	1.90	2.70	3.75	5.01	6.30	7.60	10.24	13.53	16.77	22.95	28.60	33.67
600		0.06	0.12	0.24	0.56	0.96	1.42	1.91	2.43	3.52	4.95	6.67	8.45	10.26	13.94	18.57	23.14	31.89	39.95	47.18
800		0.06	0.12	0.26	0.63	1.10	1.65	2.25	2.89	4.24	6.03	8.17	10.40	12.69	17.35	23.24	29.07	40.29	50.63	59.93
1000		0.06	0.13	0.27	0.69	1.23	1.86	2.55	3.30	4.91	7.02	9.57	12.23	14.96	20.57	27.66	34.71	48.29	60.84	72.15

LS Factors for Construction Sites. *Table from Renard et. al., 1997.*

- Coastal Zone
- Counties
- Geologic Map
- Flood Hazard Areas
- High Risk Receiving Watersheds
- Monthly Precipitation
- MS4 Areas
- RWQCB Boundaries
- USGS Topo Maps
- Watershed Boundary Dataset
- Wetlands
- Soil Risk Level Determination
 - Soil Details
 - Erosivity Index
 - Soil K Factor
 - Soil R Factor
 - Soil LS Factor

Soil LS Factor

LS_Value

10.29

Zoom to

XY

-118.742078°, 34.489154°

- Calwater Watersheds
- Coastal Zone
- Counties
- Geologic Map
- Flood Hazard Areas
- High Risk Receiving Watersheds
- Monthly Precipitation
- MS4 Areas
- RWQCB Boundaries
- USGS Topo Maps
- Watershed Boundary Dataset
- Wetlands
- Soil Risk Level Determination
 - Soil Details
 - Erosivity Index
 - Soil K Factor
 - Soil R Factor

XY

-119.155311°, 34.785518°

Soil K-Factor: 0.24

The soil-erodibility factor (K) represents: (1) the susceptibility of soil or surface material to erosion, (2) the transportability of the sediment, and (3) the amount and rate of runoff given a particular rainfall input, as measured under a standard condition. Fine-textured soils that are high in clay have low K values (about 0.05 to 0.15) because the particles are resistant to detachment. Coarse-textured soils, such as sandy soils, also have low K values (about 0.05 to 0.2) because of high infiltration resulting in low runoff, although these particles are easily detached. Medium-textured soils, such as a silt loam, have moderate K values (about 0.25 to 0.45) because they are moderately susceptible to particle detachment and they

Zoom to

Find address or place



4 mi

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
SWDR Signed Date	District	EA/Project ID	County	Route	Beg_PM	End_PM	Project Description	Project Phase	Long SWDR	Risk Level	DSA (ac)	TMDL Waterbody	Biofiltration Strips and Swales	Detention	Infiltration Devices	GSRD	TST	MedFilter	DPPIA	SA	Other BMP	Est. Const_Start	Est. Const _Comp	Net New Impervious area (NNI)	Replaced Impervious Surface (RIS)	Additional Treatment Area (ATA)	Post Const Treatment Area (ac)	Treated Impervious Area (ac)	Treated Impervious Area Balance (ac)	Treated Pervious Area (ac)	Stabilized Area (ac)	MWELO	RSA	SW Comment
	7	07-370400/0720000128	LA	5	59.70	73.70	Minor Pavement Rehabilitation	PAED	Yes	RL2	5.60	Yes	0	0	0	0	0	0	3	0	0	12/30/2024	3/3/2027	0.06	0.00	0.00	0.06	1.79	1.73	0.15	0.00	No	No	

1	2	3	4	5	6	7.000	8	9	10	11	12	13	14	15	16.000	17.000	18	19	20	21	22	23	24	25
IDNO	EA / Project ID	BMP Type	District	County	Route	LocBPM	Begin Latitude (d.d)	Begin Longitude (d.d)	LocEPM	End Latitude (d.d)	End Longitude (d.d)	Direction	Trash/Sand Capacity (cyd)	BMP Specific Comments	Treated Impervious Area (ac CT R/W)	Treated Pervious Area (ac CT R/W)	WQV Capacity (cf)	WQF Capacity (cfs)	Basis of BMP Requirement (non 402)	Stabilized Area (ac)	TMDL Waterbody	BMP Capital Cost	Watershed	RWB
07-37040/0720000128-2	07-37040/0720000128	DPPIA	7	LA	5	60.025	34.50284	-118.627880	60.016	34.5042	-118.629460	N	-	BMP No.1: Surface Area: 0.047 acre Depth: 0.5 ft	0.839	0.047	2,400			-	Santa Clara River Estuary and Reaches 3, 5, 6, 7 (Coliform)	\$63,000	Santa Clara	Los Angeles (Region 4)
07-37040/0720000128-3	07-37040/0720000128	DPPIA	7	LA	5	60.025	34.50284	-118.627880	60.016	34.5042	-118.629460	N	-							-	Santa Clara River Reach 3 (Chloride)	\$63,000	Santa Clara	Los Angeles (Region 4)
07-37040/0720000128-4	07-37040/0720000128	DPPIA	7	LA	5	60.554	34.5087	-118.633240	60.645	34.50983	-118.634070	N	-	BMP No.2: Surface Area: 0.068 acre Depth: 0.5 ft	0.260	0.068	875			-	Santa Clara River Estuary and Reaches 3, 5, 6, 7 (Coliform)	\$34,000	Santa Clara	Los Angeles (Region 4)
07-37040/0720000128-5	07-37040/0720000128	DPPIA	7	LA	5	60.554	34.5087	-118.633240	60.645	34.50983	-118.634070	N	-							-	Santa Clara River Reach 3 (Chloride)	\$34,000	Santa Clara	Los Angeles (Region 4)
07-37040/0720000128-6	07-37040/0720000128	DPPIA	7	LA	5	60.863	34.51258	-118.635940	60.968	34.51393	-118.636790	N	-	BMP No.3: Surface Area: 0.039 acre Depth: 1.0 ft	0.687	0.039	1,966			-	Santa Clara River Estuary and Reaches 3, 5, 6, 7 (Coliform)	\$93,176	Santa Clara	Los Angeles (Region 4)
07-37040/0720000128-7	07-37040/0720000128	DPPIA	7	LA	5	60.863	34.51258	-118.635940	60.968	34.51393	-118.636790	N	-							-	Santa Clara River Reach 3 (Chloride)	\$93,176	Santa Clara	Los Angeles (Region 4)

Deviation of BMPs from the Corridor Study Recommendation (supplemental attachment to SWDR)

Date: 6/12/2023
 District-County-Route: 07-LA-5
 EA 370400
 SWDR Phase: PA&ED

Treatment BMPs Recommended by the Corridor Storm Water Management Study				Proposed Treatment BMPs outlined in the Storm Water Data Report (SWDR)									Watershed	Comments
Site No.	BMP Type	Paved Tributary Area (acres)	Unpaved Tributary Area (Acres)	Site No.	County	Route	Post mile	Dir	BMP Type	Paved Tributary Area treated (acres)	Unpaved Tributary Area (Acres)	Total Area treated (Acres)		
26	Infiltration Trench	2.29	0.63	26	LA	5	60.50	N	DPPIA	0.260	0.068	0.328	Santa Clara	
23	Biofiltration Strip	3.33	1.40	23	LA	5	60.20	N	DPPIA	0.839	0.047	0.886	Santa Clara	
28	Biofiltration Swale	0.77	0.14	28	LA	5	60.76	N	DPPIA	0.687	0.039	0.726	Santa Clara	
	N/A	N/A	N/A	See Comments	LA	5	59.94/73.5	N & S	Vegetation Control	0.000	4.430	4.430	Santa Clara	Locations provided in table
Total Treatment		6.39	2.17							1.786	0.154	1.940		
Total DPP										0.000	4.430	4.430		

Note: water quality volume (WQV) = (Acres) X (43560) X (0.75 inch/12)

I have reviewed and concur with the contents of the above table.

Print name: _____ Signature: _____ Date: _____

Timothy H Tieu, District 7 Corridor Study Manager or designated representative (signature required at PS&E only)

EA 370400

Location 23 PM 60.2 Route 5 NB

- Site 23 PM 60.2 NB
- Biostrip (CS recommendation)
- Geotech Soil Test Here
- DPPIA Site 23
- DSA - paved
- Beg PM 60.025
- End PM 60.016
- Paved Area - 0.839 acres
- Unpaved Area - 0.047 acres

BMP Locations 23, 26, & 28



EA 370400

Location 26 PM 60.5 Route 5 NB

- Site 26 PM 60.51 NB
- Geotech Soil Test Here
- DPPIA Site 26
- DSA - paved
- Paved Area - 0.260 acres
- Unpaved Area - 0.068 acres
- Beg PM 60.554
- End PM 60.645

BMP Locations 23, 26, & 28



EA 370400

Location 28 PM 60.76 Route 5 NB

- Site 28 PM 60.76 NB
- Polygon 5
- DPPIA Site 28
- DSA - paved
- Beg PM 60.863
- End PM 60.968
- Paved Area - 0.687 acres
- Unpaved Area - 0.039 acres

BMP Locations 23, 26, & 28



ATTACHMENT K

List of Digout Locations

N/B Dig Out Request: Lake Hughes to Vista Del Lago

NO.	DESCRIPTION/AREA	SIZE	LANE #	MILE MARKER
1	North of Palomas wash	50' x 10'	4	60.5
2	North of Palomas wash	150' X 8'	4	61.45
3	North of Palomas wash	13' X 8'	4	61.8
4	Turn out w/ pepper tree	14' x 5'	4	62.3
5	Midway by 2 nd wall with fence	9' x 4'	4	62.45
6	End of wall w/ fence	20'x 12'	4	62.55
7	Past 1 st radiator	57' x 6'	4	62.749
8	Between radiators	77'x 14'	4	62.788
9	Between radiators	13'x 8'	4	62.790
10	Between radiators	10' x 6'	4	62.795
11	Between radiators	170' x17'	3&4	63.11
12	Just before 2 nd radiator	200' x 7'	4	63.5
13	Before CHP road	41' x 6'	4	63.85
14	Before CHP road	43' x 10'	4	63.86
15	Before CHP road	9' x 5'	4	63.87
16	Before CHP road	21' x 7'	4	63.908
17	Just past CHP road	15' x 5'	4	64.027
18	Near call box	15' x 4'	4	64.4
19	Approach for overpass		1-4	64.5
20	Pyramid lake 14 mi sign	26' x 5'	4	64.6
21	Pyramid lake 14 mi sign	25' x 5'	4	65.078
22	Pyramid lake 14 mi sign	26' x 5'	4	65.10
23	Pyramid lake 14 mi sign	19' x 6'	4	65.15
24	Templin off ramp	44' x 15'	4	65.776
25	Just north of Templin on	61' x 7'	4	66.388
26	Just north of Templin on	42' x 7'	4	66.42
27	Just north of Templin on	11' x7'	4	66.43
28	Just north of Templin on	14' x8'	4	66.47
29	Call box	75' x 9'	4	67.8
30	Call box	24' x 9'	4	68.165
31	Call box	46' x 8'	4	68.164
32	Call box	23' x 7'	4	68.166
33	Call box	34' x 9'	4	68.201
34	Libre sand shed	86' x 21'	3&4	73.5

S/B Dig Out Request: Vista Del Lago to Templin

NO.	DESCRIPTION/AREA	SIZE	LANE #	MILE MARKER
1	Cherry Cyn.	20' x 8'	4	71.403
2	Cherry Cyn.	347' x 3'	4	71.1
3	Osito Cyn.	11' x 6'	4	70.023
4	Osito Cyn.	14' x 6'	4	69.748
5	Before islands	18' x 10'	4	69.174
6	Past island before break check	155' x 3'	4	67.96
7	Just before Templin off	127' x 8'	4	66.548
8	Departure Templin bridge		1-4	65.95
9	Past Templin on before 40 mph sign	120' x 10'	2&4	65.425
10	Past Templin on before 40 mph sign	21' x 11'	4	65.411
11	Past Templin on before 40 mph sign	95' x 12'	4	65.361
12	Past Templin on before 40 mph sign	145' x 5'	4	65.291
13	Past Templin on before 40 mph sign	52' x 3'	4	65.268
14	Past Templin on before 40 mph sign	25' x 9'	4	65.264
15	5% grade 5 mi sign	75' x 10'	4	65.212
16	Past watch downhill speed	28' x 7'	4	63.9
17	200 ft elevation	12' x 5'	4	63.4
18	200 ft elevation	12' x 7'	4	63.2
19	200 ft elevation	6' x 7'	4	63.2
20	200 ft elevation	34' x 7'	4	63.0
21	200 ft elevation	45' 14'	4	62.5
22	200 ft elevation	145' x 6'	4	61.7
23	200 ft elevation	14' x 7'	4	61.6
24	200 ft elevation	66' x 24'	3&4	61.2
25	200 ft elevation	25' x 5'	4	60.8
26	200 ft elevation	10' x 16'	3&4	60.7
27	200 ft elevation	41' x 7'	4	60.5
28	200 ft elevation	42' x 8'	4	60.5
29	29. Approach of Violin Cyn.	All lanes	1-4	59.9

ATTACHMENT L

List of MBGR Upgrade Locations

**Upgrade Existing MBGR to MGS Along NB I-5
(from Lake Hughes Rd UC to Vista Del Lago Rd OC)**

Location	P.M.	P.M.	MBGR Length (ft)	MGS Under Design EA323401	Proposed MGS Length (ft)*
Lake Hughes Road UC to Templin Hwy UC					
1	R 59.94	R 59.98	185		231
2	R 59.96	R 59.99	150		188
3	R 60.50	R 60.51	65		150
4	R 60.49	R 60.-52	135		150
5	R 61.14	R 61.53	2055	400	2069
6	R 61.40	R 61.43	170		213
7	R 61.60	R 61.65	275		344
8	R 61.62	R 61.65	170		213
9	R 61.69	R 61.79	550		688
10	R 61.87	R 62.00	665		831
11	R 62.11	R 62.12	60		150
12	R 62.30	R 62.31	60		150
13	R 62.68	R 63.62	4940	1800	3925
14	R 63.38	R 63.56	930		1163
15	R 63.63	R 63.67	250		313
16	R 63.90	R 63.96	350		438
17	R 64.07	R 64.32	1320		1650
18	R 64.35	R 64.37	80		150
19	R 64.36	R 64.38	90	90	150
20	R 64.44	R 64.57	695		869
21	R 64.73	R 64.83	520	80	550
22	R 65.02	R 65.18	745	710	44
23	R 65.74	R 65.76	70		150
24	R 65.90	R 65.97	350		438
Templin Hwy UC to Forest Service Rd UC					
25	R 66.01	R 66.07	335		419
26	R 67.25	R 67.36	570		713
27	R 66.00	R 68.16	11405	100	14131
28	R 67.86	R 67.97	625		781
29	R 67.98	R 68.29	1605		2006
30	R 68.46	R 68.52	355		444
31	R 69.15	R 69.22	380		475
32	R 69.36	R 69.69	1730		2163
33	R 69.78	R 70.23	2365		2956
Total			34,066	3180	39,300

*Note: Subject to change upon final design

Use 36,200

Upgrade Existing MBGR to MGS Along NB I-5 (Ramp at Templin Hwy UC)					
Location	P.M.	P.M.	MBGR Length (ft)	MGS Under Design EA323401	Proposed MGS Length (ft)*
At Templin Hwy UC					
34	R 65.90	R 65.97	380		475
35	R 66.12	R 66.50	1980		2475
Total			2,360		2,950

*Note: Subject to change upon final design

Use 3,000

Upgrade Existing MBGR to MGS Along SB I-5 (from Vista Del Lago Rd OC to Lake Hughes Rd UC)					
Location	P.M.	P.M.	MBGR Length (ft)	MGS Under Design EA323401	Proposed MGS Length (ft)*
Vista Del Lago OC to Forest Service Rd UC					
36	R 74.03	R 73.54	2600		3250
37	R 73.20	R 72.99	1125		1407
Forest Service Rd UC to Templin Hwy UC					
38	R 72.65	R 72.42	1225		1531
39	R 71.95	R 71.91	225		281
40	R 71.79	R 71.69	540		675
41	R 71.36	R 70.75	3220		4025
42	R 70.26	R 69.88	2010		2513
43	R 69.87	R 69.76	595		744
44	R 69.81	R 69.37	2295		2869
45	R 69.26	R 68.98	1525		1906
46	R 68.85	R 68.44	2160		2700
47	R 68.39	R 67.93	2450		3063
48	R 67.51	R 67.13	2005		2506
49	R 66.99	R 66.09	4730		5913
50	R 66.09	R 66.00	495		619
Templin Hwy UC to Forest Service Rd UC					
51	R 65.97	R 65.90	300		375
52	R 65.24	R 64.80	2225		2781
53	R 64.65	R 64.60	475		594
54	R 64.51	R 64.50	155		194
55	R 64.02	R 63.60	2300		2875
56	R 63.52	R 63.30	1340		1675
57	R 63.10	R 62.90	780		975
58	R 62.75	R 62.70	280		350
59	R 62.67	R 62.40	1495		1869
60	R 61.35	R 60.1	6780	100	8350
61	R 59.80	R 59.80	85		150
62	R 59.73	R 59.70	85		150
Total			43,500	100	56,813

*Note: Subject to change upon final design

Use 56,800

Project Approval Project Report # 370400 Sign-Off Checklist

(DEADLINE 05-19-23)

Office Lead:

Office of Design B

Name / Title		Areas of Responsibility	Initials	Date
Project Engineer reviewing the PR: Ayesha Mohsin		Completeness, Content, Grammar, Cost	AM	05/10/23
Senior reviewing the PR: Terry Martinez		QC on: Completeness, Content, Grammar, Cost	TM	05-31-23
District Program Advisor(s): Md Musa		QC on: Scope, Asset Performance Measurements, Capital Cost	MM	05/16/23
District Asset Manager: Md Musa		Buy in: Need and Purpose, Cost and Scope, Program Year/Cycle	MM	05/16/23
District Program (or SB-1) Manager: Steve Tran		Buy in: Cost and Scope, Program Year/Cycle	ST	05/11/23
Office Chief of Environmental Planning: Dawn Kukla		PEAR Commitments, Ensure Mitigation Requirements and Funding, Commitments in resources, Schedule (Post 0-Phase)	DK	5/12/23
Office Chief of R/W: Zoltan Elo		R/W Data Sheet, R/W Requirements, R/W Cost, Commitments in resources, Schedule (Post 0-Phase)	ZE	05/25/23
Office Chief reviewing the PR: Essam Alameddine		QA on: Completeness, Content, Grammar, Cost	EA	05/24/23
PA/ED QMA Lead Initials	Office Chief of Design: Essam Alameddine	QA on: Cost & Scope, Risk Management, Commitments in Resources, Schedule (Post 0-Phase)	EA	05/24/23
	Office Chief of Maintenance: Shawn Enjily	QA on: Cost & Scope, Risk Management, Commitments in Resources, Schedule (Post 0-Phase)	SE	05/16/23
	Office Chief of Traffic Mobility: Siew Mei Tan	QA on: Cost & Scope, Risk Management, Commitments in Resources, Schedule (Post 0-Phase)	SMT	05/18/23
	Office Chief of Transportation Safety: Sheik Moinuddin/Jamal Fakh	QA on: Cost & Scope, Risk Management, Commitments in Resources, Schedule (Post 0-Phase)	JF SM	05/17/23 05/18/23
Assistant Division Chief (Principal):		IQA on: Format, Procedure, Completeness Buy in: Balanced delivery, Project Schedule, Scope, Resources, Risk Plan		
Project Manager: Allen Shim		Commitments to WP resources at level 4, (for reimbursed projects need presentation to Divisions Rep to obtain commitments at level 5), Project Schedule, Scope, Risk Management, Delivery Year	AS	05/17/23
Office Chief of Project Management: Osama Megalla		QA on: Cost, Project Schedule, Scope, Resources, Risk Management, Delivery year	OM	05/17/23
Deputy District Director preparing the SPSSR#2		IQA on: Signature		Use Executive Route Slip
Deputy District Director of Environmental Planning		Buy in: Environmental Schedule and cost commitments, Type of Environmental document, Permits and mitigations requirements, Balanced delivery, Resources, Delivery year (Post 0-Phase)		
Deputy District Director of Right-of-Way		Buy in: Balanced delivery, Project Schedule, Scope, Resources, Delivery year (Post 0-Phase)		
PA/ED Lead Initials	Deputy District Director of Design	Buy in: Balanced delivery, Project Schedule, Scope, Resources, Delivery year (Post 0-Phase)		
	Deputy District Director of Maintenance	Buy in: Balanced delivery, Project Schedule, Scope, Resources, Delivery year (Post 0-Phase)		
	Deputy District Director of Operations	Buy in: Balanced delivery, Project Schedule, Scope, Resources, Delivery year (Post 0-Phase)		
Deputy District Director of Program & Project Management		Buy in: Balanced delivery, Project Schedule, Scope, Resources, Delivery year (Post 0-Phase)		
Chief Deputy District Director		Recommend for approval		
District Director		Approval		

- After initialing/signing, please contact the following individual:

Ayesha Mohsin –

Ayesha.mohsin@dot.ca.gov